

## Recommended <sup>(1)</sup> Loads in Autoclaved Aerated Concrete (AAC) ( $\geq 4.0$ MPa)

Anchor size		Ø 5x25		Ø 6x30		Ø 7x35		Ø 8x40		Ø 10x50		Ø 12x60		Ø 14x80	
Screw size (mm) <sup>(2)</sup>		3.5	4	4	5	5	4.5	6	6	8	8	10	10	12	12
TU Plug with wood screw in Aerated Concrete	Tensile N (kN)	0.08	0.1	0.08	0.18	0.13	0.18	0.24	0.22	0.35	0.35	0.35	0.4	0.45	0.45
	Shear V (kN)	0.08	0.14	0.15	0.18	0.15	0.28	0.3	0.38	0.48	0.5	0.5	0.6	0.6	0.6

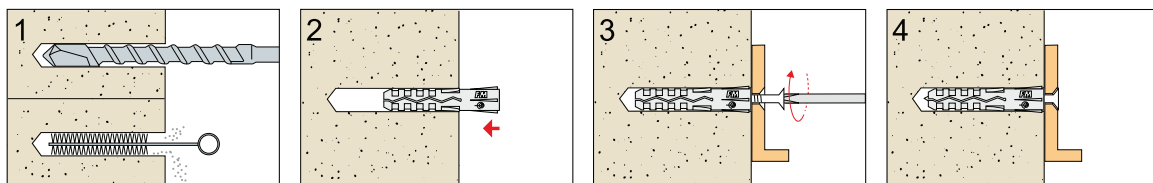
Anchor size		Ø 5x25		Ø 6x30		Ø 7x35		Ø 8x40		Ø 10x50		Ø 12x60	
Screw size (mm) <sup>(2)</sup>		3.5	4	4	4.5	5	5	6	5	6	6	8	8
TU Plug with chipboard screw in Aerated Concrete	Tensile N (kN)	0.08	0.1	0.12	0.14	0.14	0.10	0.13	0.16	0.18	0.19	0.3	0.3
	Shear V (kN)	0.12	0.12	0.16	0.16	0.18	0.13	0.16	0.22	0.3	0.35	0.5	0.5

1kN ≈ 100 kgf

<sup>(2)</sup> When tightening, the screw must protrude out of the plug by at least 1 diameter.

<sup>(1)</sup> The recommended loads derive from the mean ultimate loads and are inclusive of the total safety factor  $\gamma=6$ . When using polypropylene plugs with the indicated screws reduce the stated loads by ~ 50 %.

## 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