

Load table

Wedge anchor, stainless steel A4

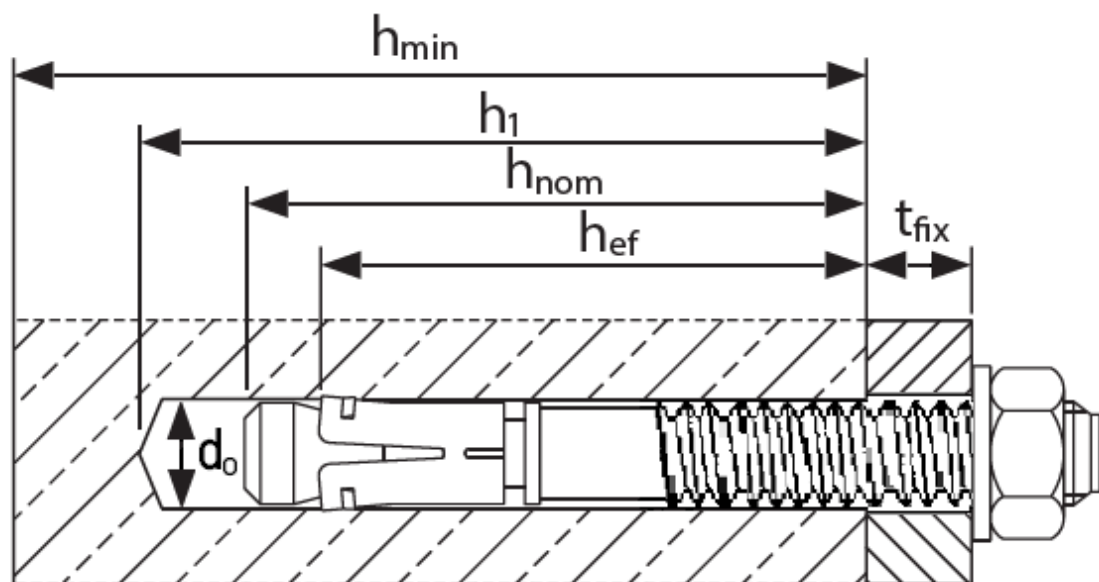
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Technical data

Product dimension			M8	M10	M12	M16
Minimum concrete thickness	h_{min}	[mm]	100	120	140	160
Drill bit diameter	d_o	[mm]	8	10	12	16
Minimum depth of drill hole	h_1	[mm]	65	80	95	115
Installation depth	h_{nom}	[mm]	55	69	80	95
Effective embedment depth	h_{ef}	[mm]	45	60	70	85
Fixture thickness	t_{fix}	[mm]	L - 63 mm	L - 79 mm	L - 93 mm	L - 111 mm
Diameter of hole in fixture	d_f	[mm]	9	12	14	18
Installation torque	T_{inst}	[Nm]	30	45	60	110
Minimum spacing distance	s_{min}	[mm]	55	75	75	95
Minimum edge distance	c_{min}	[mm]	55	75	75	95



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LOAD CAPACITY FOR CRAFTSMEN

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Load capacity - general conditions

The load capacity given below is valid for anchors installed according to the installation instructions.

The load capacity is valid for a single anchor without influence of other anchors or influence of edge distance (this means that the design resistance in a proper design case could be lower than what is given in these tables).

The load capacity is valid for an anchor that is subjected to a pure tension or shear load, not a combination of both.

For anchor groups or other design conditions it is recommended to use our software ESSVE CS or contacting our technical support, engineering@essve.com.

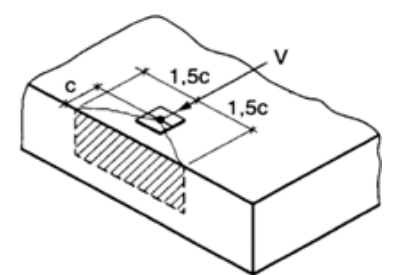
The recommended loads can be applied directly, all necessary safety factors are included in the tabulated values.

Recommended load, tension

Product dimension			M8	M10	M12	M16
Minimum concrete thickness	h_{min}	[mm]	100	120	140	160
Installation depth	h_{nom}	[mm]	55	69	80	95
Effective embedment depth	h_{ef}	[mm]	45	60	70	85
Tension, uncracked concrete C20/25	N_{rec}	[kg]	535	825	1 360	1 745
Tension, uncracked concrete C50/60	N_{rec}	[kg]	580	980	1 765	2 270
Tension, cracked concrete C20/25	N_{rec}	[kg]	-	-	-	-
Tension, cracked concrete C50/60	N_{rec}	[kg]	-	-	-	-

Recommended load, shear

Product dimension			M8	M10	M12	M16
Minimum concrete thickness	h_{min}	[mm]	100	120	140	160
Installation depth	h_{nom}	[mm]	55	69	80	95
Effective embedment depth	h_{ef}	[mm]	45	60	70	85
Shear, uncracked concrete C20/25	V_{rec}	[kg]	720	1 180	1 715	3 200
Shear, uncracked concrete C50/60	V_{rec}	[kg]	745	1 180	1 715	3 200
Shear, cracked concrete C20/25	V_{rec}	[kg]	-	-	-	-
Shear, cracked concrete C50/60	V_{rec}	[kg]	-	-	-	-



Recommended load, shear, at minimum edge distance (c_{min})

Calculation of the load capacity is based on a single anchor installed at edge distance $c = c_{min}$. See figure.

Product dimension			M8	M10	M12	M16
Minimum concrete thickness	h_{min}	[mm]	100	120	140	160
Installation depth	h_{nom}	[mm]	55	69	80	95
Effective embedment depth	h_{ef}	[mm]	45	60	70	85
Edge distance	c_{min}	[mm]	55	75	75	95
Shear, uncracked concrete C20/25	V_{rec}	[kg]	200	330	345	515
Shear, uncracked concrete C50/60	V_{rec}	[kg]	315	520	545	810
Shear, cracked concrete C20/25	V_{rec}	[kg]	-	-	-	-
Shear, cracked concrete C50/60	V_{rec}	[kg]	-	-	-	-

All information in this document is given in accordance with known facts and information at the time of writing. The information is subject to change without further notification. The document is updated continuously in conjunction with regular revision or in the event of major-specific technical changes.

All advice given by ESSVE should only be seen as guidance and does not mean that ESSVE can be held responsible for the advice provided. It is always the customer's own responsibility to decide on the choice of product, usage, application, etc. The supplier's advice is only a part of the customer's basis for decision making.

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LOAD CAPACITY FOR ENGINEERS

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Load capacity - general conditions

The load capacity given below is valid for anchors installed according to the installation instructions.

The load capacity is valid for a single anchor without influence of other anchors or influence of edge distance (this means that the design resistance in a proper design case could be lower than what is given in these tables).

The load capacity is valid for an anchor that is subjected to a pure tension or shear load, not a combination of both.

For anchor groups or other design conditions it is recommended to use our software ESSVE CS or contacting our technical support, engineering@essve.com.

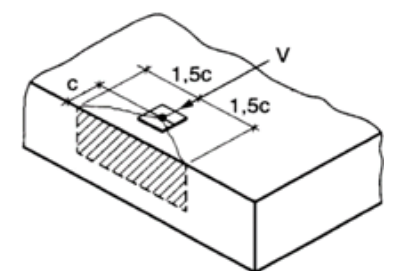
The difference between the Design resistance (N_{Rd} , V_{Rd}) and the Recommended loads (N_{rec} , V_{rec}) is that the recommended loads have an assumed load factor of $\gamma = 1.4$ based on the Ultimate Limit State (ULS) in Eurocode EN 1990.

Design resistance, tension

Product dimension			M8	M10	M12	M16
Minimum concrete thickness	h_{min}	[mm]	100	120	140	160
Installation depth	h_{nom}	[mm]	55	69	80	95
Effective embedment depth	h_{ef}	[mm]	45	60	70	85
Tension, uncracked concrete C20/25	N_{Rd}	[kN]	7,3	11,3	18,7	24,0
Tension, uncracked concrete C50/60	N_{Rd}	[kN]	8,0	13,5	24,3	31,2
Tension, cracked concrete C20/25	N_{Rd}	[kN]	-	-	-	-
Tension, cracked concrete C50/60	N_{Rd}	[kN]	-	-	-	-

Design resistance, shear

Product dimension			M8	M10	M12	M16
Minimum concrete thickness	h_{min}	[mm]	100	120	140	160
Installation depth	h_{nom}	[mm]	55	69	80	95
Effective embedment depth	h_{ef}	[mm]	45	60	70	85
Shear, uncracked concrete C20/25	V_{Rd}	[kN]	9,9	16,2	23,6	44,0
Shear, uncracked concrete C50/60	V_{Rd}	[kN]	10,2	16,2	23,6	44,0
Shear, cracked concrete C20/25	V_{Rd}	[kN]	-	-	-	-
Shear, cracked concrete C50/60	V_{Rd}	[kN]	-	-	-	-



Design resistance, shear, at minimum edge distance (c_{min})

Calculation of the load capacity is based on a single anchor installed at edge distance $c = c_{min}$. See figure.

Product dimension			M8	M10	M12	M16
Minimum concrete thickness	h_{min}	[mm]	100	120	140	160
Installation depth	h_{nom}	[mm]	55	69	80	95
Effective embedment depth	h_{ef}	[mm]	45	60	70	85
Edge distance	c_{min}	[mm]	55	75	75	95
Shear, uncracked concrete C20/25	V_{Rd}	[kN]	2,7	4,5	4,8	7,1
Shear, uncracked concrete C50/60	V_{Rd}	[kN]	4,3	7,1	7,5	11,2
Shear, cracked concrete C20/25	V_{Rd}	[kN]	-	-	-	-
Shear, cracked concrete C50/60	V_{Rd}	[kN]	-	-	-	-

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