



AT-HP™ ist ein ein styrolfreier Injektionsmörtel auf Methacrylatharzbasis (Chemische Verankerung) und speziell für die Verwendung bei anspruchsvollen Befestigungen im ungerissenen Beton und Mauerwerk. Sichere Anwendung in Innenräumen: COV A+



[DE-ETA-14/0383](#), [ETA-14/0383](#), [DE-ETA-13/0416](#),
[ETA-13/0416](#), [ETA-11/0139](#), [DE-DoP-e14/0383](#), [DE-DoP-e14/0416](#), [DE-DoP-e11/0139](#), [FDS-ATHP\(3.1\)DE](#),
[FDS-ATHP-A+B\(1.5\)UK](#)

EIGENSCHAFTEN



Material

- Styrolfreier Injektionsmörtel auf Methacrylatharzbasis.
- Gewindestange: Stahl, verzinkt und passiviert sowie nichtrostender Stahl A4-70.

Vorteile

- Hohe Verbundwerte in Beton und Mauerwerk.
- Geeignet für die Montage in feuchten und nassen Bohrlöchern.
- Feuerwiderstand geprüft (nachträglicher Bewehrungsanschluss)
- ETA's für Befestigungen im ungerissenen Beton und Mauerwerk.
- ETA für nachträglichen Bewehrungsanschluss

ANWENDUNG

Anwendbare Materialien

- Beton, Porenbeton.
- Voll- und Hochlochziegel
- Voll- und Hohlblockstein aus Beton

Anwendungsbereich

- Nachträglicher Bewehrungsanschluss.
- Befestigung von Holzkonstruktionen, Fassadenunterkonstruktionen

- Befestigung von Stahlbaukonstruktionen, Brückenkrane.
- Befestigung von Gerüsten, Geländern.

TECHNISCHE DATEN

Zubehör

Artikel	Art.Nr.	Farbe nach Aushärtung	DB. Nr.	NOBB nr.	Inhalt [ml]	Gewicht [kg]	Verpackungsmenge [pcs]
ATHP300G-FR*	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-
AT-HP + LMAS M8*	-	-	-	-	-	-	-
AT-HP + LMAS M10*	-	-	-	-	-	-	-
AT-HP + LMAS M12*	-	-	-	-	-	-	-
AT-HP + LMAS M16*	-	-	-	-	-	-	-
AT-HP + LMAS M20*	-	-	-	-	-	-	-
AT-HP + LMAS M24*	-	-	-	-	-	-	-
AT-HP + LMAS M27*	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-
AT-HP + LMAS M30*	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-

AT-HP SST - INJEKTIONSMÖRTEL FÜR VERANKERUNGEN IM BETON UND MAUERWERK

Artikel	Art.Nr.	Farbe nach Aushärtung	DB. Nr.	NOBB nr.	Inhalt [ml]	Gewicht [kg]	Verpackungsmenge [pcs]
AT-HP280-FR*	-	beige	-	-	280	0.6	12
AT-HP280B-FR*	-	gris	-	-	280	0.6	12
AT-HP380-FR*	-	gris	-	-	380	0.6	12

Zulässige Zuglasten ohne Einfluss von Achs- und Randabständen

Artikel	Zuglast - N _{rec} [kN]							
	Beton C20/25** [hef=h0=8d]	Beton C20/25** [hef=h0=12d]	Mauerziegel - RT 307 *	Hohlziegel - RT 301 *	Hohlziegel - POROTON*	Hohlziegel - LS BGV THERMO*	Hochlochtonziegel - Hohlziegel *	Autoklavier Porenbetonblöcke*
ATHP300G-FR*	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	6.1	8.7	0.43	0.43	0.26	0.43	0.34	0.26
AT-HP + LMAS M10*	9	13.5	0.43	0.43	0.34	0.57	0.57	0.34
AT-HP + LMAS M12*	12.9	19.4	0.43	0.57	0.34	0.86	0.57	0.34
AT-HP + LMAS M16*	20.4	30.6	-	-	-	-	-	-
AT-HP + LMAS M20*	29.9	44.9	-	-	-	-	-	-
AT-HP + LMAS M24*	40.2	60.3	-	-	-	-	-	-
AT-HP + LMAS M27*	47.3	70.9	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	53.9	80.8	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-

Zulässige Querlasten und Widerstandsmomente ohne Einfluss von Achs- und Randabständen

Artikel	Querlast - V_{zul} [kN]							zul. Biegemoment [Nm]
	Beton C20/25**	Mauerziegel - RT 307 *	Hohlziegel - RT 301 *	Hohlziegel - POROTON*	Hohlziegel - LS BGV THERMO*	Hochlochtonziegel - Hohlziegel *Porenbetonblöcke	Autoklavergestein	
ATHP300G-FR*	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	5.3	0.57	0.43	0.43	0.43	0.34	0.26	10.7
AT-HP + LMAS M10*	8.3	0.57	0.43	0.43	0.57	0.57	0.34	21.4
AT-HP + LMAS M12*	12.1	0.57	0.43	0.57	0.86	0.57	0.34	37.4
AT-HP + LMAS M16*	22.5	-	-	-	-	-	-	95.1
AT-HP + LMAS M20*	35	-	-	-	-	-	-	185.4
AT-HP + LMAS M24*	50.5	-	-	-	-	-	-	320.7
AT-HP + LMAS M27*	65.6	-	-	-	-	-	-	475.5
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	80.2	-	-	-	-	-	-	642.9
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-

M16, M20, M24, M27 und M30 sind nicht Bestandteil der ETA für Mauerwerk.

Lastangaben für Einzeldübel ohne Einfluss von Achs- und Randabständen im Temperaturbereich I bei der Verwendung von Gewindestangen der Güte 5.8.

*Mauerwerk:

Abmessungen	Druckfestigkeit	Rohdichte
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	L x B x H [mm]	f _b [N/mm ²]	p [kg/m ³]
Vollziegel RT 307 - Typ1 nach EN 771-1 -HD	≥228x108x54	≥22	≥1830
Hlz RT 301 - Typ 2 nach EN 771-1 -LD	≥228x108x54	≥22	≥1305
Hlz POROTON - Typ 3 nach EN 771-1 -LD	≥248x365x249	≥8	≥650
Llz LS BGV THERMO - Typ 4 nach EN 771-1 -LD	≥500x200x314	≥6	≥570
Hbl BLOCS CREUX - Typ 5 nach EN 771-1 -LD	≥500x200x200	≥4	≥900
Porenbeton - Typ 6 nach EN 771-4	≥635x250x300	≥3	≥350

Bei Interaktion von Zug- und Querlasten (Hebelarm) sowie bei Dübelgruppen und / oder Randeinfluss ist eine Bemessung nach ETAG 029, Anhang C, Bemessungsverfahren A unter Berücksichtigung der ETA-13/0416, durchzuführen.

Die Lastangaben berücksichtigen die in der ETA-Zulassung angegebenen Teilsicherheitsbeiwerte der Widerstände sowie einen Teilsicherheitsbeiwert der Einwirkungen $\gamma_F = 1,4$.

Temperaturbereich I: -40°C bis +80°C (max. Langzeit-Temperatur: +50°C; max. Kurzzeit-Temperatur: +80°C).

** Beton:

Bei Interaktion von Zug und Querlasten (Hebelarm) sowie bei Dübelgruppen und / oder Randeinfluss ist eine Bemessung nach EOTA Technical Report - TR 029 oder CEN/TS 1992-4 unter Berücksichtigung der ETA-14/0383 zu führen.

Die Lastangaben berücksichtigen die in der ETA-Zulassung angegebenen Teilsicherheitsbeiwerte der Widerstände sowie einen Teilsicherheitsbeiwert der Einwirkungen $\gamma_F = 1,4$. Bei den angegebenen Werten wird von unbewehrtem bzw. normal bewehrtem Beton mit einem Abstand der Bewehrungsstäbe $s \geq 15$ cm oder $s \geq 10$ cm bei einem Bewehrungsstabdurchmesser $d_s \leq 10$ mm ausgegangen.

Bemessungswiderstand Zug

Artikel	Bemessungs Zuglast [Nrd] [kN]			
	Beton C20/25	Vollstein-Mauerwerk - f _b > 43,8 Mpa ⁽¹⁾	Hohlziegel- 30MPa ⁽²⁾	Porenbeton 2,5MPa ⁽³⁾
ATHP300G-FR*	-	-	-	-
ATHP420G-FR*	-	-	-	-
AT-HP + LMAS M8*	6.9	0.8	0.6	0.4
AT-HP + LMAS M10*	10.2	0.8	0.6	0.5
AT-HP + LMAS M12*	14.6	0.8	0.6	0.5
AT-HP + LMAS M16*	24.5	-	-	-
AT-HP + LMAS M20*	35.9	-	-	-
AT-HP + LMAS M24*	52.3	-	-	-
AT-HP + LMAS M27*	66.2	-	-	-
AT-HP + fer Ø8 x lbdmin	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-
AT-HP + LMAS M30*	75.4	-	-	-
AT-HP + fer Ø8 x lbdmax	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-
AT-HP280-FR*	-	-	-	-

Artikel	Bemessungs Zuglast [Nrd] [kN]			
	Beton C20/25	Vollstein-Mauerwerk - fb > 43,8 Mpa ⁽¹⁾	Hohlziegel- 30MPa ⁽²⁾	Porenbeton 2,5MPa ⁽³⁾
AT-HP280B-FR*	-	-	-	-
AT-HP380-FR*	-	-	-	-

Bemessungswiderstand Abscheren

Artikel	Bemessungs Querlast [VRd] [kN]			
	Beton C20/25	Vollstein-Mauerwerk - fb > 43,8 Mpa ⁽¹⁾	Hohlziegel- 30MPa ⁽²⁾	Porenbeton 2,5MPa ⁽³⁾
ATHP300G-FR*	-	-	-	-
ATHP420G-FR*	-	-	-	-
AT-HP + LMAS M8*	7.4	0.8	0.6	0.4
AT-HP + LMAS M10*	11.6	0.8	0.6	0.5
AT-HP + LMAS M12*	16.9	0.8	0.6	0.5
AT-HP + LMAS M16*	31.4	-	-	-
AT-HP + LMAS M20*	49	-	-	-
AT-HP + LMAS M24*	70.6	-	-	-
AT-HP + LMAS M27*	91.8	-	-	-
AT-HP + fer Ø8 x lbdmin	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-
AT-HP + LMAS M30*	112.2	-	-	-
AT-HP + fer Ø8 x lbdmax	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-
AT-HP280-FR*	-	-	-	-
AT-HP280B-FR*	-	-	-	-
AT-HP380-FR*	-	-	-	-

M16, M20, M24, M27 and M30 not covered by masonry ETA.

Load specifications for single anchor without influence of spacing and edge distances in the temperature range I in the use of threaded rods of quality 5.8.

* Masonry:

	Dimensions L x W x H [mm]	Compressive strength fb [N/mm²]	Bulk density p [kg/m³]
Solid clay brick RT 307 according to EN 771-1 – HD	≥228x108x54	≥22	≥1830
Hollow clay brick RT 301– Type 1 according to EN 771-1 – LD	≥228x108x54	≥22	≥1305
Hollow clay brick POROTON– Type 2 according to EN 771-1 – LD	≥248x365x249	≥8	≥650
Hollow clay brick POROTON– Type 2 according to EN 771-1 – LD	≥500x200x314	≥6	≥570

Hollow clay brick BLOCS CREUX – Type 4 according to EN 771-1 – LD	≥500x200x200	≥4	≥900
Autoclaved aerated concrete blocks according to EN 771 – 4	≥635x250x300	≥3	≥350

1) For combined tension and shear loads or anchor groups and/or in the case of edge influence, a calculation per ETAG 029, Annex C, design method A shall be performed. For details see the ETA- approval(s).

2) The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of $\gamma_f=1.4$.

3) Temperatur range I: -40°C to +80°C (max. long-term temperatur: +50°C; max. short-term temperatur: +80°C).

4) Iunit: max. dimensions of the bricks

5) Non-bearing layers (eg. as plaster) have to be bridged.

6) The installation can be carried out in dry and wet base material.

7) The installation must be carried out in dry base material.

** Concrete:

The design resistances have been calculated using the partial safety factors for resistances stated in ETA- approvals(s).

The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of $\gamma_f=1.4$.

The load figures are valid for reinforced concrete with a rebar spacing $\geq 15\text{cm}$ (any diameter) or with a rebar spacing $\geq 15\text{cm}$ if the rebar diameter is 10mm or smaller.

The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to the edges ($c \leq \text{hef } 60d$) the concrete edge failure shall be calculated per EOTA Technical Report - TR 029 or acc. to CEN/TS 1992-4.

Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

For combined tension and shear loads or anchor groups and/or in the case of edge influence, a calculation per EOTA Technical Report - TR 029 or acc. to CEN/TS 1992-4 shall be performed. For details see the ETA- approval(s).

Technische Daten des rebar

Artikel	Ø Bewehrung [mm]	Ø Bohrung [mm]	Verankerungs- tiefe [ldb] [mm]	Zuglast - Beton C20/25 [Rds,N] [kN]	Inhalt [ml]
ATHP300G-FR*	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-
AT-HP + LMAS M8*	-	-	-	-	-
AT-HP + LMAS M10*	-	-	-	-	-
AT-HP + LMAS M12*	-	-	-	-	-
AT-HP + LMAS M16*	-	-	-	-	-
AT-HP + LMAS M20*	-	-	-	-	-
AT-HP + LMAS M24*	-	-	-	-	-
AT-HP + LMAS M27*	-	-	-	-	-
AT-HP + fer Ø8 x lbdmin	8	12	115	9.5	9
AT-HP + fer Ø10 x lbdmax	10	14	300	31	27
AT-HP + fer Ø14 x lbdmin	14	18	200	28.9	24
AT-HP + LMAS M30*	-	-	-	-	-
AT-HP + fer Ø8 x lbdmax	8	12	280	16.5	15
AT-HP + fer Ø12 x lbdmin	12	16	170	21.1	18
AT-HP + fer Ø14 x lbdmax	14	18	420	60.7	51
AT-HP + fer Ø10 x lbdmin	10	14	145	15	13
AT-HP + fer Ø12 x lbdmax	12	16	130	44.6	38
AT-HP + fer Ø16 x lbdmin	16	20	230	38	31
AT-HP + fer Ø16 x lbdmax	16	20	480	79.3	65
AT-HP + fer Ø20 x lbdmin	20	25	285	58.8	60
AT-HP + fer Ø20 x lbdmax	20	25	600	123.9	127
AT-HP + fer Ø25 x lbdmin	25	30	355	91.6	92
AT-HP + fer Ø25 x lbdmax	25	30	750	193.5	194
AT-HP + fer Ø28 x lbdmin	28	35	840	173.4	249
AT-HP + fer Ø28 x lbdmax	28	35	1000	267.7	387
AT-HP + fer Ø32 x lbdmin	32	40	685	226.3	372
AT-HP + fer Ø32 x lbdmax	32	40	1000	330.3	543
AT-HP280-FR*	-	-	-	-	-

Artikel	Ø Bewehrung [mm]	Ø Bohrung [mm]	Verankerungstiefe [ldb] [mm]	Zuglast - Beton C20/25 [Rds,N] [kN]	Inhalt [ml]
AT-HP280B-FR*	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-

Rebar Widerstand (Ha B500B) Ø8 bis Ø32 mm. Einbindetiefe unter statischen Einwirkungen (Eurocode 2) gemäß ETA-11/0139. Minimaler Abstand = 7x Durchmesser und kein Randabstand Einfluss.

Design capacities - single anchor - no edge distances - Carbon Steel

Artikel	Design capacity Carbon Steel										
	Tension - N_{Rd} [kN]					Shear - V_{Rd} [kN]					Bending moment - M_{Rd} [Nm]
	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	
ATHP300G-FR*	-	-	-	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	12.2	0.8	0.6	0.5	0.4	7.4	0.8	0.6	0.5	0.4	15
AT-HP + LMAS M10*	18.8	0.8	0.8	0.8	0.5	11.6	0.8	0.8	0.8	0.5	29.9
AT-HP + LMAS M12*	27.1	0.8	1.2	0.8	0.5	16.9	0.8	1.2	0.8	0.5	52.4
AT-HP + LMAS M16*	42.9	-	-	-	-	31.4	-	-	-	-	133.2
AT-HP + LMAS M20*	62.8	-	-	-	-	49	-	-	-	-	259.6
AT-HP + LMAS M24*	84.4	-	-	-	-	70.6	-	-	-	-	449
AT-HP + LMAS M27*	99.2	-	-	-	-	91.8	-	-	-	-	665.8
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	113.1	-	-	-	-	112.2	-	-	-	-	900
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-	-	-	-

Artikel	Design capacity										
	Carbon Steel										
	Tension - N_{Rd} [kN]					Shear - V_{Rd} [kN]					Bending moment - M_{Rd} [Nm]
	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-	-	-	-

Concrete:

- The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \leq 15$ cm (any diameter) or with a rebar spacing $s \leq 10$ cm, if the rebar diameter is 10mm or smaller.
- The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ($c \leq \max [10 \text{ hef}; 60d]$) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
- Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

Note: The capacities are given for an embedment depth in the concrete equal to 12*d

Masonry:

Details on the masonry can be found in the ETA-13/0416.

For combined tension and shear loads or anchor groups and/or in the case of edge influence, a calculation per EOTA Technical Report - TR 029 or acc. to CEN/TS 1992-4 shall be performed. For details see the ETA- approval(s).

Design capacities - single anchor - no edge distances - Stainless Steel

Artikel	Design capacity										
	Stainless Steel										
	Tension - N_{Rd} [kN]					Shear - V_{Rd} [kN]					Bending moment - M_{Rd} [Nm]
	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	
ATHP300G-FR*	-	-	-	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	12.7	0.8	0.6	0.5	0.4	8.2	0.8	0.6	0.5	0.4	16.8
AT-HP + LMAS M10*	18.8	0.8	0.8	0.8	0.5	13	0.8	0.8	0.8	0.5	33.5
AT-HP + LMAS M12*	27.1	0.8	1.2	0.8	0.5	18.9	0.8	1.2	0.8	0.5	58.8
AT-HP + LMAS M16*	42.9	-	-	-	-	35.8	-	-	-	-	149.4
AT-HP + LMAS M20*	62.8	-	-	-	-	55	-	-	-	-	291.3
AT-HP + LMAS M24*	84.4	-	-	-	-	79.2	-	-	-	-	503.7
AT-HP + LMAS M27*	80.2	-	-	-	-	48.2	-	-	-	-	349.7
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	98.1	-	-	-	-	58.9	-	-	-	-	472.7
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-	-	-	-

Artikel	Design capacity										
	Stainless Steel										
	Tension - N_{Rd} [kN]					Shear - V_{Rd} [kN]					Bending moment - M_{Rd} [Nm]
	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-	-	-	-

Concrete:

- The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \leq 15$ cm (any diameter) or with a rebar spacing $s \leq 10$ cm, if the rebar diameter is 10mm or smaller.
- The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ($c \leq \max [10 \text{ hef}; 60d]$) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
- Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

Note: The capacities are given for an embedment depth in the concrete equal to 12*d

Masonry:

Details on the masonry can be found in the ETA-13/0416.

For combined tension and shear loads or anchor groups and/or in the case of edge influence, a calculation per EOTA Technical Report - TR 029 or acc. to CEN/TS 1992-4 shall be performed. For details see the ETA- approval(s).

Recommended capacities - single anchor - no edge distances- Carbon Steel

Artikel	Recommended capacity										
	Carbon steel										
	Tension - N_{rec} [kN]					Shear - V_{rec} [kN]					Bending moment - M_{rec} [Nm]
	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	
ATHP300G-FR*	-	-	-	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	8.7	0.6	0.4	0.3	0.3	5.3	0.6	0.4	0.3	0.3	10.7
AT-HP + LMAS M10*	13.5	0.6	0.6	0.6	0.3	8.3	0.6	0.6	0.6	0.3	21.4
AT-HP + LMAS M12*	19.4	0.6	0.9	0.6	0.3	12.1	0.6	0.9	0.6	0.3	37.4
AT-HP + LMAS M16*	30.6	-	-	-	-	22.5	-	-	-	-	95.1
AT-HP + LMAS M20*	44.9	-	-	-	-	35	-	-	-	-	185.4
AT-HP + LMAS M24*	60.3	-	-	-	-	50.5	-	-	-	-	320.7
AT-HP + LMAS M27*	70.9	-	-	-	-	65.6	-	-	-	-	475.5
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	80.8	-	-	-	-	80.2	-	-	-	-	642.9
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-	-	-	-

Artikel	Recommended capacity										
	Carbon steel										
	Tension - N_{rec} [kN]					Shear - V_{rec} [kN]					Bending moment - M_{rec} [Nm]
	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-	-	-	-

Concrete:

- The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \leq 15$ cm (any diameter) or with a rebar spacing $s \leq 10$ cm, if the rebar diameter is 10mm or smaller.
- The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ($c \leq \max [10 \text{ hef}; 60d]$) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
- Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

Note: The capacities are given for an embedment depth in the concrete equal to 12*d

Masonry:

Details on the masonry can be found in the ETA-13/0416.

For combined tension and shear loads or anchor groups and/or in the case of edge influence, a calculation per EOTA Technical Report - TR 029 or acc. to CEN/TS 1992-4 shall be performed. For details see the ETA- approval(s).

Recommended capacities - single anchor - no edge distances - Stainless Steel

Artikel	Recommended capacity										
	Stainless Steel										
	Tension - N_{rec} [kN]					Shear - V_{rec} [kN]					Bending moment - M_{rec} [Nm]
	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	
ATHP300G-FR*	-	-	-	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	9.1	0.6	0.4	0.3	0.3	5.9	0.6	0.4	0.3	0.3	12
AT-HP + LMAS M10*	13.5	0.6	0.6	0.6	0.3	9.3	0.6	0.6	0.6	0.3	23.9
AT-HP + LMAS M12*	19.4	0.6	0.9	0.6	0.3	13.5	0.6	0.9	0.6	0.3	42
AT-HP + LMAS M16*	30.6	-	-	-	-	25.2	-	-	-	-	106.7
AT-HP + LMAS M20*	44.9	-	-	-	-	39.3	-	-	-	-	208.1
AT-HP + LMAS M24*	60.3	-	-	-	-	56.6	-	-	-	-	359.8
AT-HP + LMAS M27*	57.3	-	-	-	-	34.5	-	-	-	-	665.8
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	70.1	-	-	-	-	42.1	-	-	-	-	337.6
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-	-	-	-

Artikel	Recommended capacity										
	Stainless Steel										
	Tension - N_{rec} [kN]					Shear - V_{rec} [kN]					Bending moment - M_{rec} [Nm]
	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	Non-cracked concrete C20/25	Solid brick	Hollow brick	Hollow concrete block	Aerated concrete	
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-	-	-	-

Concrete:

- The recommended loadshave been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \leq 15$ cm (any diameter) or with a rebar spacing $s \leq 10$ cm, if the rebar diameter is 10mm or smaller.
- The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ($c \leq \max [10 \text{ hef}; 60d]$) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
- Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

Note: The capacities are given for an embedment depth in the concrete equal to 12*d

Masonry:

Details on the masonry can be found in the ETA-13/0416.

For combined tension and shear loads or anchor groups and/or in the case of edge influence, a calculation per EOTA Technical Report - TR 029 or acc. to CEN/TS 1992-4 shall be performed. For details see the ETA- approval(s).

Rebar capacity - Non cracked concrete

Artikel	Rebar capacity									
	rebar Ø	Holes Ø	$\alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = \alpha_5 = 1,0$				$\alpha_2 \text{ or } \alpha_5 = 0,7 \quad \alpha_1 = \alpha_3 = \alpha_4 = 1,0$			
			Embedment depth [lbd] [mm]	Recommended capacity	Design capacity	Resin Volume [ml]	Embedment depth [lbd] [mm]	Recommended capacity	Design capacity	Resin Volume [ml]
				Tension - C20/25 [Rds,N] [kN]	Tension - C20/25 [Rd,N] [kN]			Tension - C20/25 [Rds,N] [kN]	Tension - C20/25 [Rd,N] [kN]	
ATHP300G-FR*	-	-	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M10*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M12*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M16*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M20*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M24*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M27*	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmin	8	12	115	4.7	6.6	9	115	6.8	9.5	9
AT-HP + fer Ø10 x lbdmax	10	14	475	24.4	34.1	43	330	24.4	34.1	30
AT-HP + fer Ø14 x lbdmin	14	18	200	14.4	20.2	24	200	20.6	28.9	24
AT-HP + LMAS M30*	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmax	8	12	380	15.6	21.9	29	265	15.6	21.9	20
AT-HP + fer Ø12 x lbdmin	12	16	170	10.5	14.7	18	170	15.1	21.1	18
AT-HP + fer Ø14 x lbdmax	14	18	665	47.8	66.9	80	465	47.8	66.9	56
AT-HP + fer Ø10 x lbdmin	10	14	145	7.5	10.5	13	145	10.7	15	13
AT-HP + fer Ø12 x lbdmax	12	16	570	35.1	49.2	60	400	35.1	49.2	42

Artikel	Rebar capacity									
	rebar Ø	Holes Ø	$\alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = \alpha_5 = 1,0$				$\alpha_2 \text{ or } \alpha_5 = 0,7 \quad \alpha_1 = \alpha_3 = \alpha_4 = 1,0$			
			Embedment depth [lbd] [mm]	Recommended capacity	Design capacity	Resin Volume [ml]	Embedment depth [lbd] [mm]	Recommended capacity	Design capacity	Resin Volume [ml]
				Tension - C20/25 [Rds,N] [kN]	Tension - C20/25 [Rd,N] [kN]			Tension - C20/25 [Rds,N] [kN]	Tension - C20/25 [Rd,N] [kN]	
AT-HP + fer Ø16 x lbdmin	16	20	230	19	26.6	31	230	27.1	38	31
AT-HP + fer Ø16 x lbdmax	16	20	760	62.4	87.4	103	530	62.4	87.4	72
AT-HP + fer Ø20 x lbdmin	20	25	285	29.4	41.2	60	285	42	58.8	60
AT-HP + fer Ø20 x lbdmax	20	25	945	97.6	136.6	200	662	97.6	136.6	140
AT-HP + fer Ø25 x lbdmin	25	30	355	45.8	64.1	92	355	65.4	91.6	92
AT-HP + fer Ø25 x lbdmax	25	30	1000	129	180.6	259	830	152.4	213.4	215
AT-HP + fer Ø28 x lbdmin	28	35	840	86.7	121.4	249	600	123.9	173.4	249
AT-HP + fer Ø28 x lbdmax	28	35	1000	144.5	202.3	416	930	191.2	267.7	387
AT-HP + fer Ø32 x lbdmin	32	40	685	113.1	158.4	372	685	161.6	226.3	372
AT-HP + fer Ø32 x lbdmax	32	40	1000	165.1	231.2	543	1000	235.9	330.3	543
AT-HP280-FR*	-	-	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-	-	-

Rebar resistance (Ha B500B) Ø8 to Ø32 mm. Embedment depth under static loads (Eurocode 2) according to ETA-11/0139. Minimum spacing = 7x diameter and no influence of the edges.

α coefficients according to EN1992-1-1 (8.4.4)

INSTALLATION

Verarbeitungs- und Aushärtezeiten

Mörteltemperatur T _{mortar} [°C]	Bauteiltemperatur T _{base material} [°C]	Verarbeitungszeit im trocken/nassen Verankerungsgrund t _{gel} [min]	Aushärtezeit im trockenen/ nassen Verankerungsgrund t _{cure} [min; h]
+5°C	-5°C bis -1°C	15min	9h
+5°C	0°C bis 4°C	12min	4h
+5°C	5°C bis 9°C	9min	1,5h
+10°C	10°C bis 19°C	4min	60min
+20°C	20°C bis 29°C	1min	30min
+30°C	30°C und darüber	<1min	20min

Version mit Farbumschlag. Nach der minimalen Aushärtezeit ändert sich die Farbe des Injektionsmörtel von Blau nach Grau. Ein vollständiger Farbumschlag erfolgt nur bei Temperaturen über 5°C.

Bohrverfahren

Vollstein-Mauerwerk/Beton	Schlag-/Hammerbohren
HLz-Mauerwerk	Drehbohren
Porenbeton	Schlag-/Hammerbohren



Bohren



Bürsten



Insert a sieve.



Feed the hole from the end to the external surface by going back from 1 mixer graduation between each pump.



Stab einsetzen und langsam drehen.



Fix when the curing time is reached.



Bohrloch hammerbohend erstellen.



Bohrloch mit Bürste reinigen und ausblasen:



Vor dem Injizieren: Mörtel auspressen



Saubere und ölfreie Gewindestange



Während der Verarbeitungszeit kann die

AT-HP SST - INJEKTIONSMÖRTEL FÜR VERANKERUNGEN IM BETON UND MAUERWERK

Durchmesser und Bohrtiefe beachten.

Druckluft (6 bar) für Bohrungen hef $\geq 10d$ oder $> \varnothing 22\text{mm}$: 4 x Ausblasen, 4 x Bürsten, 4 x Ausblasen.

bis dieser eine einheitliche hellblaue Färbung aufweist. Mörtelvorlauf (min. 3 Hübe) verwerfen! Mörtel vom Bohrlochgrund aus hubweise injizieren bis 2/3 des Bohrlochs verfüllt sind.

mit leichten Drehbewegungen bis zum Bohrlochgrund eindrücken.

Gewindestange nachjustiert bzw. Mörtelfehlmenge nachinjiziert werden. Der Anker darf erst nach der Aushärtezeit belastet werden.

Montagedaten - Beton



Artikel	Ø Bohrung [d0] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h0=hef=8d] [mm]	Verankerungstiefe [h0=hef=12d] [mm]	Schlüsselweite [SW]	Montagedrehmoment [Tinst] [Nm]	Char. Achsabstand (4) - S _{cr,N} [scr,N] [mm]	Mindestachsabstand [smin]	Char. Randabstand (4) [ccr,N] [mm]	min. Randabstand [cmin] [mm]	Mindestbauteilstärke - hef=8d [hmin] [mm]
ATHP300G-FR*	-	-	-	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	10	9	64	96	13	10	175	40	88	40	100
AT-HP + LMAS M10*	12	12	80	120	17	20	213	50	106	50	110
AT-HP + LMAS M12*	14	14	96	144	19	40	255	60	128	60	126
AT-HP + LMAS M16*	18	18	128	192	24	80	330	80	165	80	164
AT-HP + LMAS M20*	22	22	160	240	30	150	400	100	200	100	204
AT-HP + LMAS M24*	28	26	192	288	36	200	447	120	223	120	248
AT-HP + LMAS M27*	30	30	216	324	41	270	503	135	251	135	276

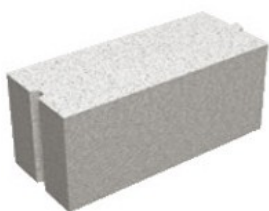
AT-HP SST - INJEKTIONSMÖRTEL FÜR VERANKERUNGEN IM BETON UND MAUERWERK

Artikel	Ø Bohrung [d0] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h0=hef=8d] [mm]	Verankerungstiefe [h0=hef=12d] [mm]	Schlüssel- weite [SW]	Montage- drehmoment [Tinst] [Nm]	Char. Achs- abstand (4) - S _{cr,N} [scr,N] [mm]	Mindestachs- abs. [smin]	Char. Rand- abstand [ccr,N] [mm]	min. Rand- abstand [cmin] [mm]	Mindest- bauteilstärke - hef=8d [hmin] [mm]
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	35	33	240	360	46	300	537	150	268	150	310
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-	-	-	-

AT-HP SST - INJEKTIONSMÖRTEL FÜR VERANKERUNGEN IM BETON UND MAUERWERK

Artikel	Ø Bohrung [d0] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h0=hef=8d] [mm]	Verankerungstiefe [h0=hef=12d] [mm]	Schlüsselweite [SW]	Montagedrehmoment [Tinst] [Nm]	Char. Achsabstand ⁽⁴⁾ - S _{cr,N} [scr,N] [mm]	Mindestachsabs. [smin]	Char. Randabstand ⁽⁴⁾ [ccr,N] [mm]	min. Randabstand [cmin] [mm]	Mindestbauteilstärke - hef=8d [hmin] [mm]
AT-HP280-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-	-	-	-

Montagedaten - Porenbeton



Artikel	Ø Bohrung [d0] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h1] [mm]	Schlüsselweite [SW]	Montagedrehmoment [Tinst] [Nm]	Verankerungstiefe [hef] [mm]	Char. Achsabstand ⁽⁴⁾ - S _{cr,N} [mm]	Mindestachsabs. - S _{min} [mm]	Char. Randabstand ⁽⁴⁾ - C _{cr,N} [mm]	min. Randabstand - C _{min} [mm]
ATHP300G-FR*	-	-	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	10	9	85	13	4	80	160	50	80	50
AT-HP + LMAS M10*	12	12	85	15	6	80	200	50	100	50
AT-HP + LMAS M12*	14	14	85	18	8	80	240	50	120	50
AT-HP + LMAS M16*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M20*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M24*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M27*	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-	-	-

Artikel	Ø Bohrung [d0] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h1] [mm]	Schlüsselweite [SW]	Montagedrehmoment [Tinst] [Nm]	Verankerungstiefe [hef] [mm]	Char. Achs- abstand ⁽⁴⁾ - S _{cr,N} [mm]	Mindest- achsabstand - S _{min} [mm]	Char. Rand- abstand ⁽⁴⁾ - C _{cr,N} [mm]	min. Rand- abstand - C _{min} [mm]
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-	-	-

Montagedaten - Vollziegel V



Artikel	Ø Bohrung [d0] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h1] [mm]	Schlüsselweite [SW]	Montagedrehmoment [Tinst] [Nm]	Verankerungstiefe [hef] [mm]	Char. Achs- abstand ⁽⁴⁾ - S _{cr,N} [mm]	Mindest- achsabstand - S _{min} [mm]	Char. Rand- abstand ⁽⁴⁾ - C _{cr,N} [mm]	min. Rand- abstand - C _{min} [mm]
ATHP300G-FR*	-	-	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	10	9	85	13	4	80	160	50	80	50
AT-HP + LMAS M10*	12	12	85	15	6	80	200	50	100	50
AT-HP + LMAS M12*	14	14	85	18	8	80	240	50	120	50
AT-HP + LMAS M16*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M20*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M24*	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M27*	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-	-	-

Artikel	Ø Bohrung [d0] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h1] [mm]	Schlüsselweite [SW]	Montagedrehmoment [Tinst] [Nm]	Verankerungstiefe [hef] [mm]	Char. Achs- abstand ⁽⁴⁾ - S _{cr,N} [mm]	Mindest- achsabstand - S _{min} [mm]	Char. Rand- abstand ⁽⁴⁾ - C _{cr,N} [mm]	min. Rand- abstand - C _{min} [mm]
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-	-	-

Montagedaten - Hochlochziegel Hlz



Artikel	Ø Bohrung [d0] [mm]	Länge Siebhülse [ds x ls] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h1] [mm]	Schlüsselweite [SW]	Montagedrehmoment [Tinst] [Nm]	Verankerungstiefe [hef] [mm]	Char. Achs- abstand ⁽⁴⁾ - S _{cr,N} [mm]	Mindest- achsabstand - S _{min} [mm]	Char. Rand- abstand ⁽⁴⁾ - C _{cr,N} [mm]	min. Rand- abstand - C _{min} [mm]
ATHP300G-FR*	-	-	-	-	-	-	-	-	-	-	-

AT-HP SST - INJEKTIONSMÖRTEL FÜR VERANKERUNGEN IM BETON UND MAUERWERK

Artikel	Ø Bohrung [d0] [mm]	Länge Siebhülse [ds x ls] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h1] [mm]	Schlüsselweite [SW]	Montagedrehmoment [Tinst] [Nm]	Verankerungstiefe [hef] [mm]	Char. Achs- abstand ⁽⁴⁾ - S _{cr,N} [mm]	Mindest- achsabstand - S _{min} [mm]	Char. Rand- abstand ⁽⁴⁾ - C _{cr,N} [mm]	min. Rand- abstand - C _{min} [mm]
ATHP420G-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	16	16 x 85 & 16 x 130	9	135	13	4	130	500	100	250	100
AT-HP + LMAS M10*	16	16 x 85 & 16 x 130	12	135	15	6	130	500	100	250	100
AT-HP + LMAS M12*	16	16 x 85 & 16 x 130	14	135	18	8	130	500	100	250	100
AT-HP + LMAS M16*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M20*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M24*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M27*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-	-	-	-

Montagedaten - Hohlblock Hbl



Artikel	Ø Bohrung [d0] [mm]	Länge Siebhülse [ds x ls] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h1] [mm]	Schlüssel- weite [Sw]	Montage- drehmoment [Tinst] [Nm]	Verankerungstiefe [hef] [mm]	Charakter. Achsabstand (4) - S _{cr,N} [mm]	Mindest- achsabstand - S _{min} [mm]	Char. Rand- abstand ⁽⁴⁾ - C _{cr,N} [mm]	min. Rand- abstand - C _{min} [mm]
ATHP300G-FR*	-	-	-	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	16	16 x 130	9	135	13	4	130	500	100	250	100
AT-HP + LMAS M10*	16	16 x 130	12	135	15	6	130	500	100	250	100
AT-HP + LMAS M12*	16	16 x 130	14	135	18	8	130	500	100	250	100
AT-HP + LMAS M16*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M20*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M24*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M27*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-	-	-	-

Artikel	Ø Bohrung [d0] [mm]	Länge Siebhülse [ds x ls] [mm]	Max. Bohrloch Ø [df] [mm]	Verankerungstiefe [h1] [mm]	Schlüsselweite [Sw]	Montagedrehmoment [Tinst] [Nm]	Verankerungstiefe [hef] [mm]	Charakter. Achsabstand (4) - S _{cr,N} [mm]	Mindestachsabstand - S _{min} [mm]	Char. Randabstand (4) - C _{cr,N} [mm]	min. Randabstand - C _{min} [mm]
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP280B-FR*	-	-	-	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-	-	-	-

Installations Parameter - Vollziegel fb>22 MPa 1)



Artikel	Mindestbauteildicke [hmin] [mm]	Effekt. Verankerungstiefe [hef] [mm]	Ø Bohrung [d0] [mm]	Verankerungstiefe [h1] [mm]	Montagedrehmoment [Tinst] [Nm]	Max. Bohrloch Ø [df] [mm]	Charakter. Randabstand [C1 & C2] [mm]	Charakter. Achsabstand (2) - S _{cr,N} [S1 & S2] [mm]
ATHP300G-FR*	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	108	80	10	85	4	9	250	250
AT-HP + LMAS M10*	108	80	12	85	6	12	250	250
AT-HP + LMAS M12*	108	80	14	85	8	14	250	250
AT-HP + LMAS M16*	-	-	-	-	-	-	-	-
AT-HP + LMAS M20*	-	-	-	-	-	-	-	-
AT-HP + LMAS M24*	-	-	-	-	-	-	-	-
AT-HP + LMAS M27*	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-

Artikel	Mindestbauteildicke [h _{min}] [mm]	Effekt. Verankerungstiefe [h _{ef}] [mm]	Ø Bohrung [d ₀] [mm]	Verankerungstiefe [h ₁] [mm]	Montagedrehmoment [T _{inst}] [Nm]	Max. Bohrloch Ø [d _f] [mm]	Charakter. Randabstand [C1 & C2] [mm]	Charakter. Achsabstand (2) - S _{cr,N} [S1 & S2] [mm]
AT-HP + fer Ø12 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-
AT- HP280B-FR*	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-

Installations Parameter - Hohlblock fb>22 MPa 1)

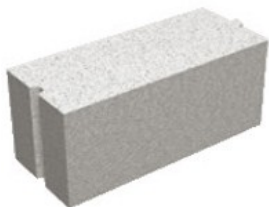


Artikel	Mindestbauteildicke [h _{min}] [mm]	Effekt. Verankerungstiefe [h _{ef}] [mm]	Ø Bohrung [d ₀] [mm]	Verankerungstiefe [h ₁] [mm]	Montagedrehmoment [T _{inst}] [Nm]	Max. Bohrloch Ø [d _f] [mm]	Charakter. Randabstand [C1 & C2] [mm]	Charakter. Achsabstand (2) - S _{cr,N} [S1 & S2] [mm]
ATHP300G-FR*	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	108	85	16	90	4	9	250	250

AT-HP SST - INJEKTIONSMÖRTEL FÜR VERANKERUNGEN IM BETON UND MAUERWERK

Artikel	Mindestbauteildicke [h _{min}] [mm]	Effekt. Verankerungstiefe [h _{ef}] [mm]	Ø Bohrung [d ₀] [mm]	Verankerungstiefe [h ₁] [mm]	Montagedrehmoment [T _{inst}] [Nm]	Max. Bohrloch Ø [d _f] [mm]	Charakter. Randabstand [C1 & C2] [mm]	Charakter. Achsabstand (2) - S _{cr,N} [S1 & S2] [mm]
AT-HP + LMAS M10*	108	85	16	90	6	12	250	250
AT-HP + LMAS M12*	108	85	16	90	6	14	250	250
AT-HP + LMAS M16*	-	-	-	-	-	-	-	-
AT-HP + LMAS M20*	-	-	-	-	-	-	-	-
AT-HP + LMAS M24*	-	-	-	-	-	-	-	-
AT-HP + LMAS M27*	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x l _{bdmin}	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x l _{bdmax}	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-
AT- HP280B-FR*	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-

Installations Parameter - Gasbeton fb>3,0 MPa 3)



Artikel	Mindestbauteildicke [hmin] [mm]	Effekt. Verankerungstiefe [hef] [mm]	Ø Bohrung [d0] [mm]	Verankerungstiefe [h1] [mm]	Montagedrehmoment [Tinst] [Nm]	Max. Bohrloch Ø [df] [mm]	Charakter. Randabstand [C1 & C2] [mm]	Charakter. Achsabstand [S1 & S2] [mm]
ATHP300G-FR*	-	-	-	-	-	-	-	-
ATHP420G-FR*	-	-	-	-	-	-	-	-
AT-HP + LMAS M8*	100	80	10	85	2	9	250	250
AT-HP + LMAS M10*	100	80	12	85	3	12	250	250
AT-HP + LMAS M12*	100	80	14	85	4	14	250	250
AT-HP + LMAS M16*	-	-	-	-	-	-	-	-
AT-HP + LMAS M20*	-	-	-	-	-	-	-	-
AT-HP + LMAS M24*	-	-	-	-	-	-	-	-
AT-HP + LMAS M27*	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + LMAS M30*	-	-	-	-	-	-	-	-
AT-HP + fer Ø8 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø14 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø10 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø12 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø16 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø20 x lbdmax	-	-	-	-	-	-	-	-

Artikel	Mindestbauteildicke [hmin] [mm]	Effekt. Verankerungstiefe [hef] [mm]	Ø Bohrung [d0] [mm]	Verankerungstiefe [h1] [mm]	Montagedrehmoment [Tinst] [Nm]	Max. Bohrloch Ø [df] [mm]	Charakter. Randabstand [C1 & C2] [mm]	Charakter. Achsabstand [S1 & S2] [mm]
AT-HP + fer Ø25 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø25 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø28 x lbdmax	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmin	-	-	-	-	-	-	-	-
AT-HP + fer Ø32 x lbdmax	-	-	-	-	-	-	-	-
AT-HP280-FR*	-	-	-	-	-	-	-	-
AT- HP280B-FR*	-	-	-	-	-	-	-	-
AT-HP380-FR*	-	-	-	-	-	-	-	-

1) Mursten iht. EN 771-1, fuger som eller bedre end KC 50/50/700, ingen ankre i fugerne.

2) Mindre end 250 mm hvis kun 1 anker i hver mursten.

3) Gasbeton iht. EN771-4.

Forudsætninger:

Gevindstænger er LMAS i el-galvaniseret og rustfri A4. Stålkvalitet er min. 5,8 samt A4-70. Alle angivne installationsdetaljer skal være opfyldt.

Lastbæreevnen er angivet i kN (1 kN = 100 kg) og gælder for hvert anker. Alle værdier er regningsmæssige værdier og testet iht. relevante standarder.

Indbyrdes ankerafstande (S) og kantafstande (C) i ovenstående tabel er minimumsafstande, uden reduktion i ankerbæreevnen pga. indbyrdes ankerafstande og kantafstande.

Hvis der er fuger tættere på ankeret end angivne kantafstand, skal det sikres at disse vil være i stand til at overføre lasterne. Ved brug af ovenstående lastbæreevner, skal lasten regnes ned til hvert enkelt anker i hvert enkelt lasttilfælde. Betonen forudsættes armeret. Ved tværlast må max. to ankre optage lasten.

De angivne forudsætninger kan ikke afviges, ved tvivl kontakt Simpson Strong-Tie® A/S på tlf:

+45 8781 7400, eller anvend Teknisk Håndbog fra www.strongtie.dk

Kontrol:

1. $NRd \geq NSd$ og $VRd \geq VSd$ og for kombinerede

2. $(NSd/NRd) + (VSd/VRd) \leq 1,2$

Både 1 og 2 skal være opfyldt.

NRd (ankerets tilladelige træklastbæreevne) skal være større end eller lig med NSd (ankerets aktuelle træklastbelastning) eller VRd (ankerets tilladelige tværlastbæreevne) skal være større end eller lig med VSd (ankerets aktuelle tværlastbelastning).