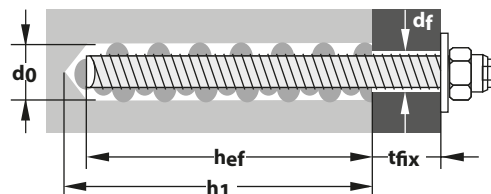


Features

- Low cost composite mortar for common heavy-duty applications
- Small axis and edge distances for anchoring without spreading pressure
- Usual threaded rods* can be used
- Styrene-free
- Processing even possible at low temperatures (down to -5°C)
- Can be used in dry and water-filled drill holes
- Fixing of high loads weighing up to 10.6 tonnes
- Reuse of the broken cartridge by changing the static mixer

*according to approval





ACHTUNG



Liquix Pro 7
300 ml

Liquix Mix

Liquix Sleeve

Pack	Item No.	Type	Content	Cartridge	Drill \varnothing	Min. Drill hole depth	Effective anchorage depth	Fixture Thickness	Approval
	Liquix Plus 7 Fixing Set		per pack		d_0 \varnothing mm	h_1 \geq mm	h_{ef} mm	t_{fix} \leq mm	ETA
	084 901 91	300 ml	1x Liquix Plus 7 2x Liquix Mix 6x Liquix Sleeve 16 x 85 6x Stix M10 x 165	tubular film	-	-	-	-	■
	Liquix Plus 7 Box		per pack		d_0 \varnothing mm	h_1 \geq mm	h_{ef} mm	t_{fix} \leq mm	ETA
	084 100 211	165 ml	12x Liquix Plus 7 24x Liquix Mix	tubular film	-	-	-	-	■
	084 100 121	300 ml	12x Liquix Plus 7 24x Liquix Mix	tubular film	-	-	-	-	■
	084 100 131	345 ml	12x Liquix Plus 7 24x Liquix Mix	side-by-side	-	-	-	-	■



Description & Area of Application

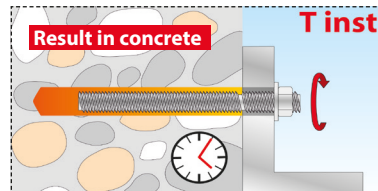
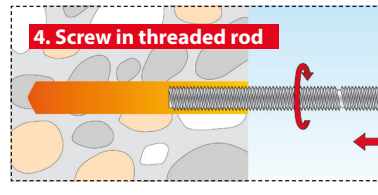
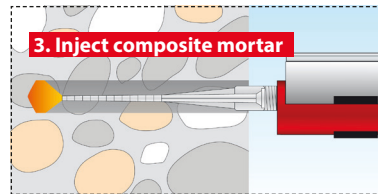
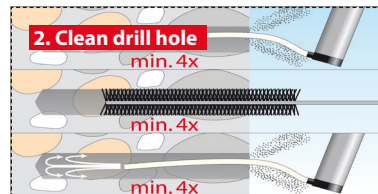
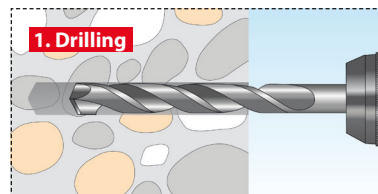
- The mortar may be used in wet and dry concrete
- For overhead installation, the threaded rod must be fixed according to the processing time
- Approved in connection with usual threaded rods or the TOX threaded rod Stix



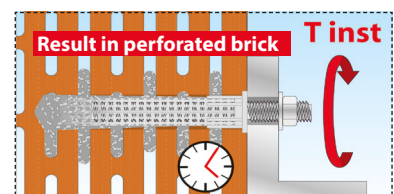
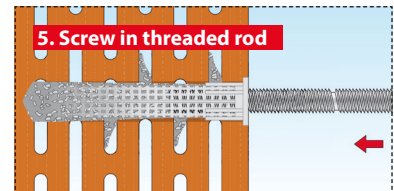
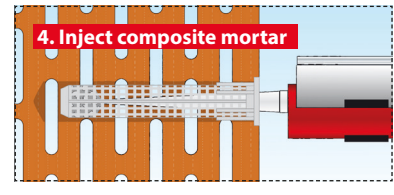
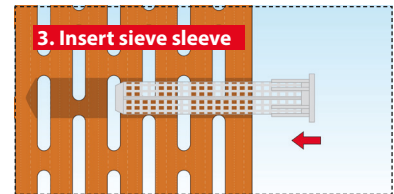
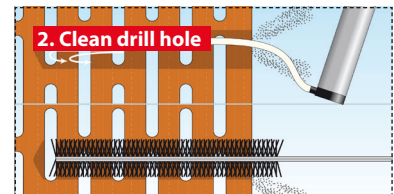
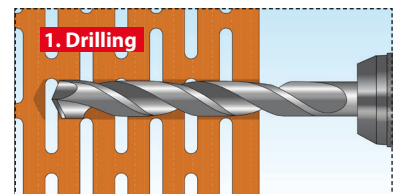
Processing & Installation

- In perforated brick, work with sieve sleeve
- Clean drill hole
- Screw static mixer tightly onto the cartridge
- Mark setting depth differing from standard onto anchor rod
- Discard the first approx. 10 cm of the composite mortar and do not use it for fixing
- Fill the cleaned drill hole approx. 2/3 of the way from the base of the drill hole or, if a sieve sleeve is used, fill it completely with composite mortar
- Insert the anchor rod with slight turning movements to the specified setting depth
- Observe the torques and curing times of the respective valid permits
- The mortar may be used in wet and dry concrete
- For the processing of coaxial, peeler and tubular film cartridges, use the Liquix Blaster and Liquix Blaster Pro cartridge guns; for side-by-side cartridges use the Liquix Blaster Plus

Installation in concrete and solid brick



Installation in perforated brick



Liquix Pro 7 in concrete C20/25	M8	M10	M12	M16	M20	M24
Effective anchoring depth	60-160 mm	60-200 mm	70-240 mm	80-320 mm	90-400 mm	96-480 mm
Permissible central tension load of a single anchor without edge influence N_{rec} in uncracked concrete C20/25						
Threaded rod galvanised, property class 5.8	510-860 kg	600-1380 kg	840-2000 kg	1280-3710 kg	1670-5810 kg	1840-8380 kg
Threaded rod A4, property class 70	510-990 kg	600-1570 kg	840-2250 kg	1280-4200 kg	1670-6530 kg	1840-9430 kg
Permissible shear load of a single anchor without edge influence V_{rec} in uncracked concrete C20/25						
Threaded rod galvanised, property class 5.8	510 kg	860 kg	1200 kg	2230 kg	3490 kg	5030 kg
Threaded rod A4, property class 70	600 kg	920 kg	1370 kg	2520 kg	3940 kg	5680 kg
Component dimensions and installation characteristics						
Minimum spacing s_{min}	40 mm	50 mm	60 mm	80 mm	100 mm	120 mm
Minimum edge distance c_{min}	40 mm	50 mm	60 mm	80 mm	100 mm	120 mm
Minimum member thickness h_{min}	----- $h_{ef} + 30 \text{ mm} \geq 100 \text{ mm}$ -----			----- $h_{ef} + 2d_0$ -----		
Drill hole diameter d_0	10 mm	12 mm	14 mm	18 mm	24 mm	28 mm
Drill hole depth $h_1 \geq$	60-160 mm	60-200 mm	70-240 mm	80-320 mm	90-400 mm	96-480 mm
Clearance hole diameter $d_f \leq$	9 mm	12 mm	14 mm	18 mm	22 mm	26 mm
Installation torque T_{inst}	10 Nm	20 Nm	40 Nm	80 Nm	120 Nm	160 Nm

- The specified loads refer to anchorings of a single anchor in wet and dry concrete as well as for anchorings from -40°C to $+24^\circ \text{C}$ (or briefly up to $+40^\circ \text{C}$)
- When sizing, the entire declaration of performance of the Liquix Plus 7 must be observed
- The partial safety factors of the resistances specified in the approval and a partial safety factor of $\gamma_F = 1.4$ have been considered
- Approved plugs must be used for fixings where safety is of importance (see also www.tox.de/safety+loads)

Curing times for composite mortar Liquix Plus 7:

Concrete temperature	Processing time	Minimum curing time
-5 to -1°C	90 min.	360 min.
0 to $+4^\circ \text{C}$	45 min.	180 min.
+5 to $+9^\circ \text{C}$	25 min.	120 min.
+10 to $+14^\circ \text{C}$	20 min.	100 min.
+15 to $+19^\circ \text{C}$	15 min.	80 min.
+20 to $+29^\circ \text{C}$	6 min.	45 min.
+30 to $+34^\circ \text{C}$	4 min.	25 min.
+35 to $+39^\circ \text{C}$	2 min.	20 min.

The cartridge temperature must be between $+5^\circ$ to $+40^\circ \text{C}$



Liquix Plus 7 in masonry	Effective anchoring depth h_{ef}	Drill hole depth h_0	Drill hole diameter d_0	Brush \emptyset	Sieve sleeve	T_{inst}	Permissible Tensile load N_{rec}	Permissible Shear load V_{rec}
Brick $Mz f_b \geq 28 N/mm^2$								
M8	80 mm	80 mm	10 mm	10 mm	-	6 Nm	90 kg	160 kg
M10	90 mm	90 mm	12 mm	14 mm	-	10 Nm	90 kg	190 kg
M12	100 mm	100 mm	14 mm	16 mm	-	10 Nm	70 kg	260 kg
M16	100 mm	100 mm	18 mm	20 mm	-	10 Nm	130 kg	260 kg
Vertically-perforated brick $Hlz f_b \geq 12 N/mm^2$								
M8	80 mm	85 mm	12 mm	14 mm	12x80	6 Nm	40 kg	100 kg
M8/M10	85 mm	90 mm	16 mm	18 mm	16x85	6 Nm	70 kg	170 kg
M8/M10	130 mm	135 mm	16 mm	18 mm	16x130	6 Nm	100 kg	190 kg
M12/ M16	85 mm	90 mm	20 mm	22 mm	20x85	6 Nm	100 kg	170 kg
Solid sand-lime brick $KS f_b \geq 27 N/mm^2$								
M8	80 mm	80 mm	10 mm	10 mm	-	10 Nm	160 kg	140 kg
M10	90 mm	90 mm	12 mm	14 mm	-	20 Nm	160 kg	170 kg
M12	100 mm	100 mm	14 mm	16 mm	-	20 Nm	190 kg	190 kg
M16	100 mm	100 mm	18 mm	20 mm	-	20 Nm	160 kg	170 kg
Perforated sand-lime brick $KSL f_b \geq 14 N/mm^2$								
M8	80 mm	85 mm	12 mm	14 mm	12x80	8 Nm	70 kg	90 kg
M8/M10	85 mm	90 mm	16 mm	18 mm	16x85	8 Nm	70 kg	110 kg
M8/M10	130 mm	135 mm	16 mm	18 mm	16x130	8 Nm	110 kg	140 kg
M12/ M16	85 mm	90 mm	20 mm	22 mm	20x85	8 Nm	70 kg	130 kg
Lightweight concrete solid block $Hbn f_b \geq 2 N/mm^2$								
M8	80 mm	80 mm	10 mm	10 mm	-	6 Nm	60 kg	90 kg
M10	90 mm	90 mm	12 mm	14 mm	-	6 Nm	60 kg	100 kg
M12	100 mm	100 mm	14 mm	16 mm	-	10 Nm	60 kg	110 kg
M16	100 mm	100 mm	18 mm	20 mm	-	10 Nm	60 kg	110 kg
Lightweight concrete hollow block $B40 f_b \geq 4 N/mm^2$								
M8	80 mm	85 mm	12 mm	14 mm	12x80	2 Nm	10 kg	30 kg
M8/M10	85 mm	90 mm	16 mm	18 mm	16x85	2 Nm	20 kg	90 kg
M8/M10	130 mm	135 mm	16 mm	18 mm	16x130	2 Nm	60 kg	100 kg
M12/ M16	85 mm	90 mm	20 mm	22 mm	20x85	2 Nm	30 kg	90 kg
Aerated concrete $P2 f_b \geq 2 N/mm^2$								
M8	80 mm	80 mm	10 mm	10 mm	-	2 Nm	30 kg	50 kg
M10	90 mm	90 mm	12 mm	14 mm	-	2 Nm	30 kg	70 kg
M12	100 mm	100 mm	14 mm	16 mm	-	2 Nm	40 kg	90 kg
M16	100 mm	100 mm	18 mm	20 mm	-	2 Nm	40 kg	130 kg
Aerated concrete $P4 f_b \geq 4 N/mm^2$								
M8	80 mm	80 mm	10 mm	10 mm	-	2 Nm	30 kg	40 kg
M10	90 mm	90 mm	12 mm	14 mm	-	2 Nm	90 kg	70 kg
M12	100 mm	100 mm	14 mm	16 mm	-	2 Nm	90 kg	90 kg
M16	100 mm	100 mm	18 mm	20 mm	-	2 Nm	130 kg	130 kg
Aerated concrete $P6 f_b \geq 6 N/mm^2$								
M8	80 mm	80 mm	10 mm	10 mm	-	2 Nm	70 kg	200 kg
M10	90 mm	90 mm	12 mm	14 mm	-	2 Nm	110 kg	320 kg
M12	100 mm	100 mm	14 mm	16 mm	-	2 Nm	160 kg	320 kg
M16	100 mm	100 mm	18 mm	20 mm	-	2 Nm	200 kg	390 kg

- The specified loads refer to anchorings of a single anchor without environmental effects as well as for anchorings from $-40^\circ C$ to $+24^\circ C$ (or briefly up to $+40^\circ C$)
- When sizing, the entire declaration of performance of the Liquix Plus 7 must be observed
- Drilling into perforated brick in rotary mode
- The partial safety factors of the resistances and a partial safety factor of $\gamma_F = 1.4$ have been considered
- For other masonry types see approval ETA-13/0053
- Approved plugs must be used for fixings where safety is of importance (see also www.tox.de/safety+loads)