

STEEL CONCRETE SCREW ETA OPTION 1

BETABOLT



Anchor design software

EUROPEAN TECHNICAL APPROVAL

1488-CPD-0383/W
ETA-13/0934 - ETAG 001-3
option 1



MATERIALS



CRACKED CONCRETE



NON CRACKED CONCRETE



FB120



FEATURES

Material :

- 10B21 steel according SAE-J403
- Spun galvanised coating ($\geq 40 \mu\text{m}$) + mechanically deposited acc.to EN ISO 12683

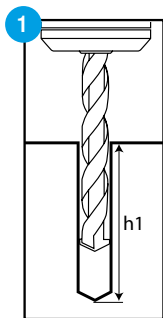
Advantages :

- Fast and easy installation with a wrench
- Fast removal ideal for temporary fixing
- Optimal fit ; significant shear and tensile strength
- ETA for cracked and non cracked concrete

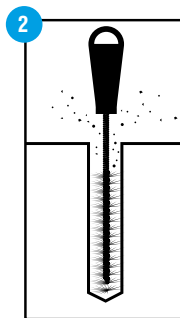
APPLICATION EXAMPLES

- Shuttering props
- Railings, shelving systems
- Industrial equipment
- Wooden or steel secondary structures
- Cable trays, steel banding

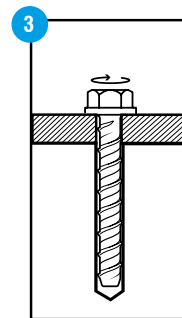
INSTALLATION



1 Drill a hole with a hammer drill to the recommended depth h_1 .



2 Remove dust with a wire brush or blow out with a manual hand pump or compressed air. Repeat 3 times.

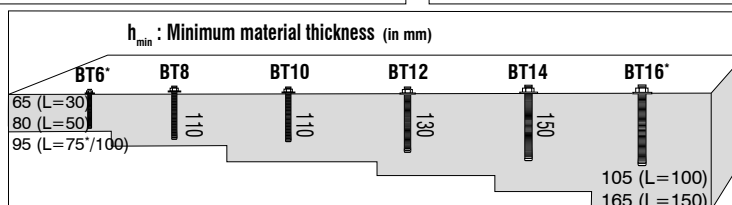
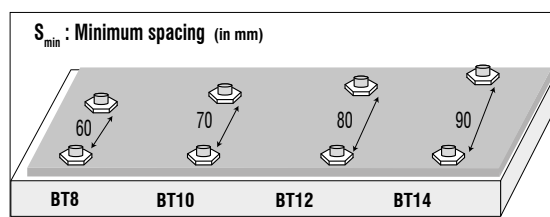
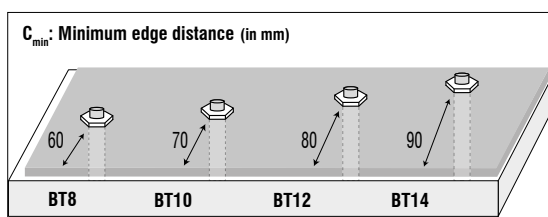


3 Screw the BETABOLT concrete screw through the fixture with a wrench by applying sufficient torque t_{inst} to clamp the material to the concrete.

NB: the BETABOLT SCREW can only be used once.
Carbide tips and threads wear out during first use. In case of reuse, it does not allow to reestablish the initial performances.

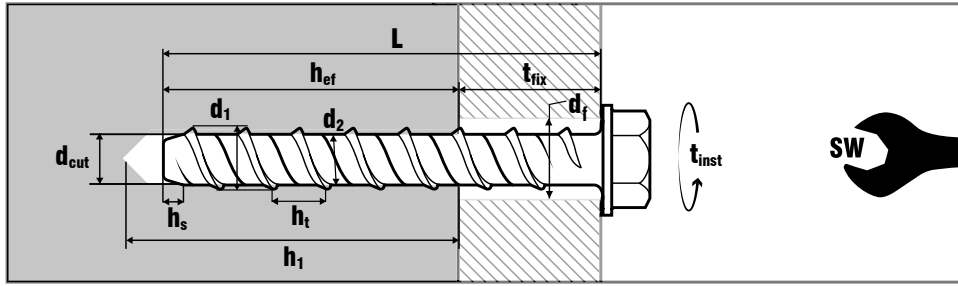
(h_1 and t_{inst} : For technical data see overleaf)

INSTALLATION DATAS



*Factory data. Out of ETA.

DIMENSIONS & APPLICATION DATAS



DIMENSION AND INSTALLATION DATA

RANGE / PACKAGING

		BT06	BT08	BT10	BT12	BT14	BT16
Ø drill size (mm)	d_{cut}	6	8	10	12	14	16
Clearance hole in the fixture (mm)	d_f	8	12	14	16	18	20
Torque setting (N.m)	T_{inst}	10	30	40	50	60	80
Socket/wrench size	SW	10	13	15	16	18	21
Bolt diameter	d_k	-	7,5	9,37	11,35	13,20	-
Higher thread diameter	d_1	7,75	9,85	11,95	14,08	16,23	18,30
Lower thread diameter	d_2	6,15	8,13	10,25	12,15	14,18	16,20
Thread pitch	h_t	8	10	12	12	17	20
Chamfer length of lead in point	h_s	5	5	5	5	5	5

Ø	L	Standard anchor depth			Reduced anchor depth			Part No	Box qty	Cardboard box
		t_{fix} std	h_1 std	h_{ef} std	t_{fix} max	h_1 min	h_{ef} min			
6.0	30	5	35	25	5	35	25	BT060030*	100	800
	50	10	50	40	10	50	40	BT060050*	100	800
	75	20	65	55	20	65	55	BT060075*	100	400
	100	45	65	55	45	65	55	BT060100*	100	400
8.0	60	10	60	50	15	55	45	BT080060	50	200
	75	10	75	65	30	55	45	BT080075	50	200
	100	35	75	65	55	55	45	BT080100	50	200
10.0	60	10	60	50	10	60	50	BT100060	50	200
	75	15	70	60	25	60	50	BT100075	50	200
	100	25	85	75	50	60	50	BT100100	50	200
	130	55	85	75	80	60	50	BT100130	25	100
	150	75	85	75	100	60	50	BT100150	25	100
12.0	200	125	85	75	150	60	50	BT100200	20	80
	75	15	70	60	25	60	50	BT120075	25	100
	100	5	105	95	50	60	50	BT120100	25	100
	150	55	105	95	100	60	50	BT120150	20	80
14.0	80	10	80	70	20	70	60	BT140080	20	80
	100	30	80	70	40	70	60	BT140100	20	80
	130	15	125	115	70	70	60	BT140130	20	80
	150	35	125	115	90	70	60	BT140150	10	40
16.0	100	14	96	86	30	80	70	BT160100*	20	80
	150	64	96	86	80	80	70	BT160150*	10	40

*Overall dimension ETA

h_{ef} : anchor depth // h_1 : drill depth // t_{fix} : fixture thickness

RECOMMENDED LOADS

- Loads are calculated from characteristic values published in the ETA on which partial safety factors from the ETAG001 and a partial action f coefficient = 1.4 are applied. Values are given for standard anchor depths : 68 mm for Ø8 / 75 mm for Ø10 / 95 mm for Ø12 / 115 mm for Ø14. For other cases, refer to ETA-13/0934.
- Ø16 is not included in the ETA, values come from tests done in the production site (anchor depth h_{ef} = 86 mm).
- Values calculated in concrete C20 / 25, T = 24 ° C / 40 ° C.

