steel&tube | FORTRESS® FASTENERS

SCREWBOLTS

An anchor bolt with an external thread which cuts its own thread into the base material after a pilot hole has been drilled. The Screwbolt can withstand a load as soon as the thread engages in the base material.

Screwbolts are completely removable, virtually expansion free, making them ideal for close to edge distance fixing. Ideal for most anchor fixing requirements into concrete.

MECHANICAL GALVANISED

ANCHOR DIAMETER	ANCHOR EMBEDMENT	DRILL HOLE DIAMETER	MIN THICKNESS BASE MATERIAL	CLEARANCE HOLE IN FIXTURE	RECOMMENDED TORQUE	C20/25 CONCRETE ULTIMATE		C20/25 CONCRETE WORKING LOAD	
	mm	mm	mm	mm	Nm	PULL-OUT (Kn)	SHEAR (Kn)	PULL-OUT (Kn)	SHEAR (Kn)
M6	25	6	100	8	10	6.9	9.0	2.3	3.0
	35		130			9.2	14.5	3.0	4.8
	45		150			11.0	19.0	3.6	6.3
M8	35	8	100	12	20	7.5	17.0	2.5	5.6
	40		110			9.0	22.0	3.0	7.3
	50		130			12.0	30.0	4.0	9.9
M10	40	10	110	14	40	12.0	11.0	4.0	3.6
	50		130			20.0	28.0	6.6	9.2
	75		150			36.0	36.0	11.9	11.9
	90		175			50.0	47.0	16.5	15.5
	100		200			50.0	58.0	16.5	19.1
M12	50	12	130	16	60	13.5	21.0	4.5	6.9
	60		150			19.0	36.0	6.3	11.9
	90		175			45.0	56.0	14.9	18.5
	100		200			46.0	65.0	15.2	21.5
M16	65	16	150	20	80	25.0	55.0	8.3	18.2
	75		150			46.0	70.0	15.2	23.1
	85		200			61.0	69.0	20.1	22.8
	90		200			42.0	92.0	13.9	30.4

SPECIFICATION SHEET

APR 2024

ANCHOR DIAMETER	ANCHOR EMBEDMENT	DRILL HOLE DIAMETER	MIN THICKNESS BASE MATERIAL	CLEARANCE HOLE IN FIXTURE	RECOMMENDED TORQUE	C32 CONCRETE ULTIMATE		C32 CONCRETE WORKING LOAD	
	mm	mm	mm	mm	Nm	PULL-OUT (Kn)	SHEAR (Kn)	PULL-OUT (Kn)	SHEAR (Kn)
M6	25	6	100	8	10	4.8	8.8	1.6	2.9
	35		130			10.0	14.5	3.3	4.8
	45		150			13.5	17.0	4.5	5.6
M8	35	8	100	12	20	8.0	17.0	2.6	5.6
	40		110			10.0	17.0	3.3	5.6
	50		130			17.0	29.0	5.6	9.6
M10	40	10	110	14	40	9.0	22.0	3.0	7.3
	50		130			13.0	29.0	4.3	9.6
	75		150			37.0	56.0	12.2	18.5
	90		175			41.0	46.0	13.5	15.2
	100		200			50.0	52.0	16.5	17.2
M12	50	12	130	16	60	14.5	33.0	4.8	10.9
	60		150			18.0	44.0	5.9	14.5
	90		175			37.0	57.0	12.2	18.8
	100		200			48.0	80.0	15.8	26.4
M16	65	16	150	20	80	35.0	79.0	11.6	26.1
	75		150			48.0	94.0	15.8	31.0
	85		200			59.0	103.0	19.5	34.0
	90		200			52.0	100.0	17.2	33.0

Material: Steel C10B21 / Surface Hardness: HRC 41-46

	M6	M8	M10	M12	M16
WIDTH ACROSS FLATS	10	13	15	16	21
HEAD HEIGHT	7	9	10	12	15
FLANGE DIAMETER	15	18	23	25	32
MAJOR DIAMETER	8	10	12	14	18

*All measurements approx & subject to change

Screw bolts/Anchor screws are an increasing popular fastener for fixing into concrete. However installation of these can be difficult so we recommend the following steps:

1. Use a hammer drill & SDS drill bit for concrete making sure the correct diameter is selected for the fixing to be used and is that it not worn. In most cases the correct diameter drill bit is the same as the listed diameter of the screwbolt e.g. M12 x 75mm screwbolt use a 12mm drill bit.
2. The hole depth should be about 2 times the diameter plus the full working length of the anchor, this extra length will allow for the dust created when the bolt is installed to drop to bottom of the hole and not impede the anchor performance.
3. Remove dust from the drilled hole by easing the drill bit up and down within the hole, ideally the hole should be cleaned with a brush or blow pump before the anchor is inserted.
4. Using the correct size socket apply pressure to head of the anchor to ensure the first thread bites in the substrate. Keep downward pressure on the head of the anchor during full installation.
5. If resistance is encountered when screwing down the anchor, simply unscrew one-two turns to release trapped dust, and then continue to tighten down. The anchor is set when the underside of the head of the anchor meets the face of the object being fixed to the substrate.
6. Screwbolts can be used with a closer edge distance than your typical expansion anchor (Sleeve Anchor/Through Bolt) Screw bolts can also be re-used but any risk of failure is with the installer.

   With a wide range of diameters and lengths M6-M16 50mm-200mm there is a screwbolt for all jobs.