

# fischer

## Wall Bolt FWB

Segmented steel shield anchor –  
the widely accepted traditional fixing.



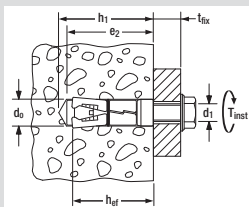
FWB, zinc-plated steel

### DESCRIPTION

- Segmented steel shield anchor with internal thread for pre-positioned installation.
- Due to internal metric thread versatile for various head types.
- When the screw or hexagon nut is tightened, the cone is pulled into the expansion shields and pushes them against the hole wall.
- Three piece shield for even load spread.
- Surface-flush fixing allows the attached item to be removed.
- Zinc-plated steel version for indoor use.

### Suitable for:

- Non-cracked concrete  
≥ C12/15.

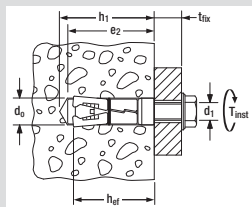


Type	Art. No.	Thread	Nominal drill-Ø	Total length	Min. drill depth at prior insertion mode	Min. anchorage depth	Min. bolt penetration	Installation torque	Qty. per box
		$d_1$ M [mm]	$d_0$ [mm]	$l$ [mm]	$h_1$ ≥ [mm]	$h_{ef}$ ≥ [mm]	$e_2$ ≥ [mm]	$T_{inst}$ [Nm]	[pcs.]
<b>Shield only</b>									
FWB M6 S	<b>44963</b>	6	12	45	50	35	40	10	25
FWB M8 S	<b>44964</b>	8	14	50	60	40	45	25	25
FWB M10 S	<b>44965</b>	10	16	60	70	50	55	40	25
FWB M12 S	<b>44966</b>	12	20	75	85	60	70	75	25
FWB M16 S	<b>44967</b>	16	25	115	130	95	105	180	10
FWB M20 S	<b>44970</b>	20	32	130	150	110	120	220	10

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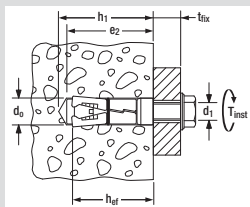


Type	Art. No.	Thread	Nominal drill- $\emptyset$	Total length	Min. drill depth at prior insertion mode	Min. anchorage depth	Max. fixing thickness	Min. bolt penetration	Screw- $\emptyset$ x length	Installation torque	Qty. per box
		$d_1$ M	$d_0$	$l$	$h_1$ $\geq$ [mm]	$h_{ef}$ $\geq$ [mm]	$t_{fix}$ $\leq$ [mm]	$e_2$ $\geq$ [mm]		$T_{inst}$ [Nm]	[pcs.]
<b>Loosebolt (with hex head screw)</b>											
FWB M6 x 55 L	44976	6	12	45	50	35	10	40	M 6 x 55	10	25
FWB M6 x 70 L	44977	6	12	45	50	35	25	40	M 6 x 70	10	25
FWB M6 x 85 L	44978	6	12	45	50	35	40	40	M 6 x 85	10	25
FWB M8 x 65 L	44979	8	14	50	60	40	10	45	M 8 x 65	25	25
FWB M8 x 80 L	44990	8	14	50	60	40	25	45	M 8 x 80	25	25
FWB M8 x 95 L	44991	8	14	50	60	40	40	45	M 8 x 95	25	25
FWB M10 x 75 L	44992	10	16	60	70	50	10	55	M10 x 75	40	25
FWB M10 x 90 L	44993	10	16	60	70	50	25	55	M10 x 90	40	25
FWB M10 x 115 L	44994	10	16	60	70	50	50	55	M10 x 115	40	25
FWB M10 x 140 L	44995	10	16	60	70	50	75	55	M10 x 140	40	25
FWB M12 x 90 L	44996	12	20	75	85	60	10	70	M12 x 90	75	25
FWB M12 x 105 L	44997	12	20	75	85	60	25	70	M12 x 105	75	25
FWB M12 x 120 L	44998	12	20	75	85	60	40	70	M12 x 120	75	25
FWB M12 x 140 L	44999	12	20	75	85	60	60	70	M12 x 140	75	25
FWB M16 x 135 L	45079	16	25	115	125	95	15	95	M16 x 135	180	10
FWB M16 x 150 L	45099	16	25	115	125	95	30	95	M16 x 150	180	10
FWB M16 x 180 L	45108	16	25	115	125	95	60	95	M16 x 180	180	10
FWB M20 x 195 L	45109	20	32	130	150	110	60	110	M20 x 195	220	10
<b>Projecting Bolt (with threaded rod, washer and nut)</b>											
FWB M6 x 65 P	45110	6	12	45	50	35	10	40	M 6 x 65	10	25
FWB M6 x 80 P	45119	6	12	45	50	35	25	40	M 6 x 80	10	25
FWB M6 x 115 P	45124	6	12	45	50	35	60	40	M 6 x 115	10	25
FWB M8 x 75 P	45158	8	14	50	60	40	10	45	M 8 x 75	25	25
FWB M8 x 90 P	45159	8	14	50	60	40	25	45	M 8 x 90	25	25
FWB M8 x 125 P	45173	8	14	50	60	40	60	45	M 8 x 125	25	25
FWB M10 x 90 P	45174	10	16	60	70	50	15	55	M10 x 90	40	25
FWB M10 x 105 P	45175	10	16	60	70	50	30	55	M10 x 105	40	25
FWB M10 x 135 P	45186	10	16	60	70	50	60	55	M10 x 135	40	25
FWB M12 x 110 P	45190	12	20	75	85	60	15	70	M12 x 110	75	25
FWB M12 x 125 P	45191	12	20	75	85	60	30	70	M12 x 125	75	25
FWB M12 x 170 P	45208	12	20	75	85	60	75	70	M12 x 170	75	25
FWB M20 x 185 P	45209	20	32	130	150	110	30	120	M20 x 185	220	10
<b>Eyebolt</b>											
FWB M6 x 73 E	45270	6	12	45	50	35	-	40	M 6 x 73	10	25
FWB M8 x 87 E	45290	8	14	50	60	40	-	45	M 8 x 87	25	25
FWB M10 x 108 E	45402	10	16	60	70	50	-	55	M10 x 108	40	25
FWB M12 x 130 E	45419	12	20	75	85	60	-	70	M12 x 130	75	25
<b>Hookbolt</b>											
FWB M6 x 83 H	45533	6	12	45	50	35	-	40	M 6 x 83	10	25
FWB M8 x 98 H	45534	8	14	50	60	40	-	45	M 8 x 98	25	25
FWB M10 x 120 H	45535	10	16	60	70	50	-	55	M10 x 120	40	25

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Type	Art. No.	Thread	Nominal drill-Ø	Min. anchorage depth	Min. drill depth at prior insertion mode	Total length	Installation torque	Qty. per box
		$d_1$ UNC [inch]	$d_0$ [inch]	$h_{ef} \geq$ [inch]	$h_1 \geq$ [inch]	$l$ [inch]	$T_{inst}$ [Nm]	[pcs.]
<b>Shield only</b>								
FWB 1/4	<b>50096</b>	1/4	3/8	1 3/8	2	1 3/4	10	25
FWB 5/16	<b>50100</b>	5/16	1/2	1 9/16	2 3/8	2 1/8	25	25
FWB 3/8	<b>50130</b>	3/8	5/8	2	2 3/4	2 1/2	40	25
FWB 1/2	<b>50143</b>	1/2	3/4	2 3/8	3 1/8	2 7/8	75	25
FWB 5/8	<b>50146</b>	5/8	1	3 3/4	4 3/4	4 1/2	180	25

Recommended loads of single anchors in non-cracked concrete C20/25 without edge or spacing influences.

Anchor type		FWB 6 S	FWB 8 S	FWB 10 S	FWB 12 S	FWB 16 S	FWB 20 S
<b>Steel</b>		<b>gvz</b>	<b>gvz</b>	<b>gvz</b>	<b>gvz</b>	<b>gvz</b>	<b>gvz</b>
Effective anchorage depth	$h_{ef} \geq$ [mm]	35	40	50	60	95	110

Recommended tension loads  $N_{rec}$  of single anchors without edge or spacing influence

in non-cracked concrete C20/25	$N_{rec}$ [kN]	1.5	2.0	4.0	6.0	8.0	8.0
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Recommended shear loads  $V_{rec}$  of single anchors without edge or spacing influence

in non-cracked concrete C20/25	$V_{rec}$ [kN]	1.5	2.0	4.0	6.0	8.0	8.0
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Component dimensions and installation parameters

Minimum edge distance	$c_{min}$ [mm]	55	60	75	90	145	165
Minimum spacing	$s_{min}$ [mm]	110	120	150	180	290	330
Minimum structural component thickness	$h_{min}$ [mm]	100	100	100	120	190	220
Nominal drill hole diameter	$d_0$ [mm]	12	14	16	20	25	32
Drill hole depth	$h_1 \geq$ [mm]	50	60	70	85	130	150
Clearance-hole in the fixture to be attached	$d_f \leq$ [mm]	7	9	12	14	18	22
Installation torque	$T_{inst}$ [Nm]	10	25	40	75	180	220

All values apply for non-cracked concrete C20/25 with normal reinforcement or not reinforced without edge or spacing influences.

Recommended loads: material safety factor  $\gamma_M$  and safety factor for load  $\gamma_L = 1.4$  are included.

### Installation

