

## Installation Guide Single Expansion Bolts (FBN II)

### Before Installation

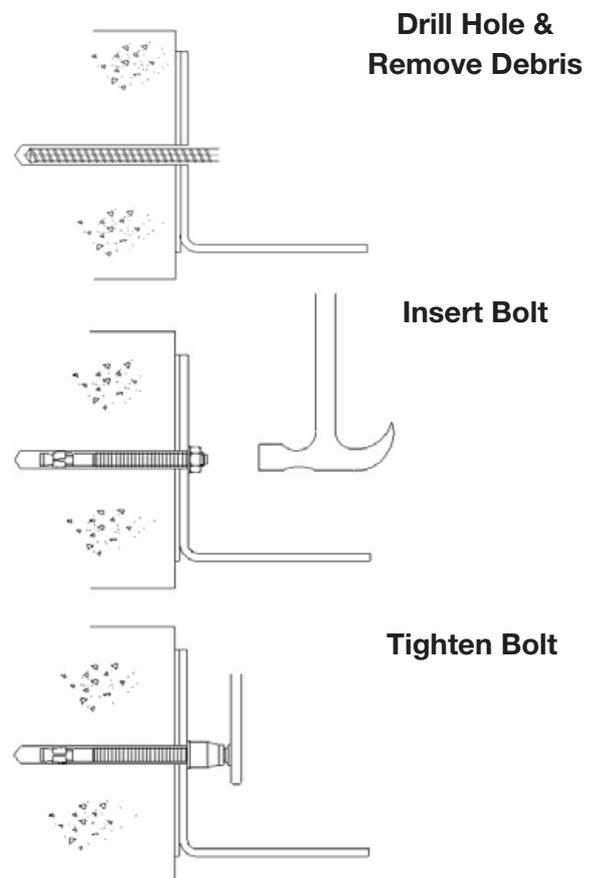
The following checks must be carried out prior to installation of Single Expansion Bolts.

1. The appropriate length and diameter drill bit is used.
2. The correct edge distance and spacing are used in accordance with the design requirements.
3. The anchor/fixing is the correct size.
4. The correct setting tools are used.

Drill the hole through the pre-drilled hole in the fixture into the concrete. This hole should be drilled perpendicular to the substrate surface and to the correct diameter and depth. All dust and loose material should be removed from the hole using a wire brush or blow pump.

Lightly tap the throughbolt through the fixture into the hole with a hammer, until the fixing depth is reached.

Tighten to the recommended torque.



### Single Expansion Bolts

Bolt Reference	FBNII 6/10	FBNII 8/20	FBNII 10/20	FBNII 10/50	FBNII 12/20	FBNII 12/50	FBNII 16/25	FBNII 16/50
Thread Size	M6	M8	M10	M10	M12	M12	M16	M16
Overall Length (mm)	55	81	96	126	116	146	145	170
Hole Dia. in Concrete (mm)	6	8	10	10	12	12	16	16
Hole Dia. in Fixture (mm)	6.5	9	11	11	13	13	17	17
Min. Embedment (mm)	30	40	50	50	65	65	80	80
Width Across Nut (mm)	10	13	17	17	19	19	24	24
Tightening Torque (Nm)	4	10	20	20	35	35	80	80
Max. Fixing Thickness (mm)	10	20	20	50	20	50	25	50

**Note:** For use in non-cracked concrete C20/25 to C50/60.

## Installation Guide High Performance Bolts (FAZ II)

### Before Installation

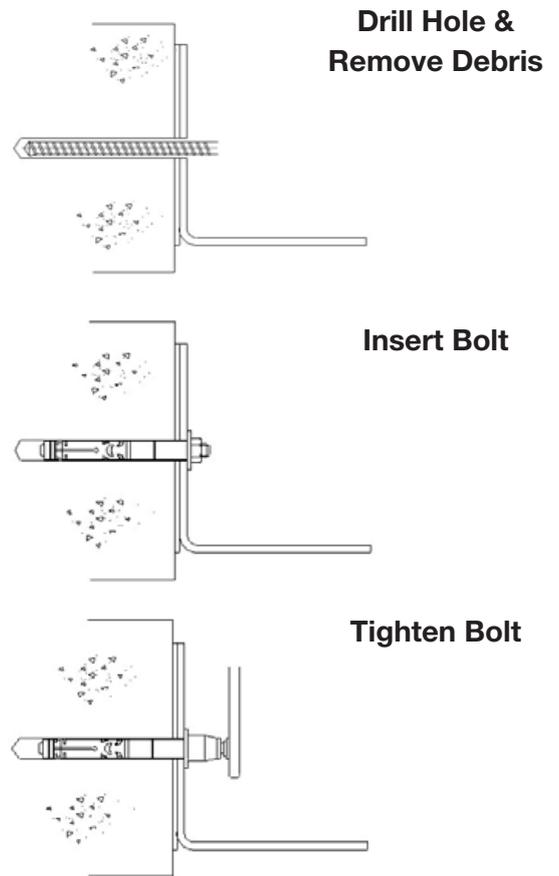
The following checks must be carried out prior to installation of High Performance Bolts.

1. The appropriate length and diameter drill bit is used.
2. The correct edge distance and spacing are used in accordance with the design requirements.
3. The anchor/fixing is the correct size.
4. The correct setting tools are used.

Drill the hole through the pre-drilled hole in the fixture into the concrete. This hole should be drilled perpendicular to the substrate surface and to the correct diameter and depth. All dust and loose material should be removed from the hole using a wire brush or blow pump.

Insert the bolt through the component to be fixed and into the concrete. Add any packing shims that maybe required.

Tighten to the recommended torque.



### Single Expansion Bolts

Bolt Reference	FAZII 8/30	FAZII 10/10	FAZII 10/30	FAZII 10/50	FAZII 12/30	FAZII 12/50	FAZII 16/25	FAZII 16/50
Thread Size	M8	M10	M10	M10	M12	M12	M16	M16
Overall Length (mm)	95	95	115	135	130	150	148	173
Hole Dia. in Concrete (mm)	8	10	10	10	12	12	16	16
Hole Dia. in Fixture (mm)	9	11	11	11	13	13	17	17
Min. Embedment (mm)	45	60	60	60	70	70	85	85
Width Across Nut (mm)	13	17	17	17	19	19	24	24
Tightening Torque (Nm)	20	45	45	45	60	60	110	110
Max. Fixing Thickness (mm)	30	10	30	50	30	50	25	50

**Note:** For use in cracked and non-cracked concrete C20/25 to C50/60.

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The Construction applications and details provided in this guide are indicative only. In every case installation should be entrusted to appropriately qualified and experienced persons. Normal handling precautions should be taken to avoid physical injury. Leviat cannot be held responsible for any injury as a result of using our products, unless such injury arises as a result of our negligence.