

Machine alignment with

BW-Fixators®

1. Lower the machine upon the BW-FIXATORS®
2. Use the BW-FIXATORS® to pre-level the machine neutrally, i.e. with anchor bolt nuts slack, to a precision of approx. ± 0.02 mm.
3. Use an ordinary hex head wrench to tighten the anchor bolt nuts BY HAND (see table point 4)
4. Give all set screws in the BW-FIXATORS® one right-hand turn to obtain extra anchor bolt prestress. The set screws must also be turned if higher prestressing force should be required in the anchor bolts (see table point 6).
5. Level the machine up to final precision, taking care to make upward adjustments only, as far as possible, to prevent the loss of anchor bolt prestress.
6. If the machine should need re-leveling some time later, repeat such upward adjustments, if possible, against the tightened anchor bolt nuts.
7. If the "upward" leveling of the machine should be impracticable or uneconomical (if only one point must be leveled downwards for instance), proceed as follows:
 - a) Use the set screws to pull the BW-FIXATORS® down, thus producing a visible gap between the spherical washer and machine bed sole.
 - b) Use the anchor bolt nuts to push the machine bed down and beyond the level to be obtained.
 - c) Again, use the set screws to raise the BW-FIXATORS® until the desired level has been reached.

Notes:

When pulling the machine bed down, make sure to avoid excessive tension in the anchor bolts. A torque wrench should be used for this work. If the yield point of the anchor bolt material is exceeded, some adjacent BW-FIXATORS® will possibly have to be readjusted, too, in the manner described so that several anchor bolts will be engaged in the downward thrust.

The permissible clamping force and torque values can be taken from the following table.



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BW-FIXATORS®

Series RK

Special parameters for set screws and anchor bolts

Anchor bolt	DIM Ø	RK I M16	RK II M20	RK III M24	RK IV M30	RK V M36	RK V M42	RK VI M42	RK VI M56
1. Height adjustment per turn of the set screw	mm	0,25	0,25	0,29	0,35	0,43	0,43	0,5	0,5
2. Maximum torque permissible at the set screw	Nm	27	36	96	160	385	385	700	700
3. Specific torque at the anchor bolt nut	$\frac{\text{Nm}}{10^3 \cdot \text{kg}}$	27	34	40	50	60	70	70	94
4. Torque determined at a hand-tightened anchor bolt nut	Nm	70	130	160	250	320	400	400	600
5. Prestressing force at a hand-tightened anchor bolt nut	$10^3 \cdot \text{N}$	26	38	40	50	53	57	57	68
6. Increase in prestressing force by one turn of the set screw against a hand-tightened anchor bolt nut	$10^3 \cdot \text{N}$	18	20	27	48	66	100	115	130
7. Total prestressing force (add point 5 and 6)	$10^3 \cdot \text{N}$	44	58	67	98	119	157	172	198
8. Torque at the anchor bolt nut at the yield point of the anchor bolt	Nm	140	270	450	900	1600	2700	2700	5600
9. Prestressing force at the yield point of the anchor bolt	$10^3 \cdot \text{N}$	53	81	115	182	265	385	385	600