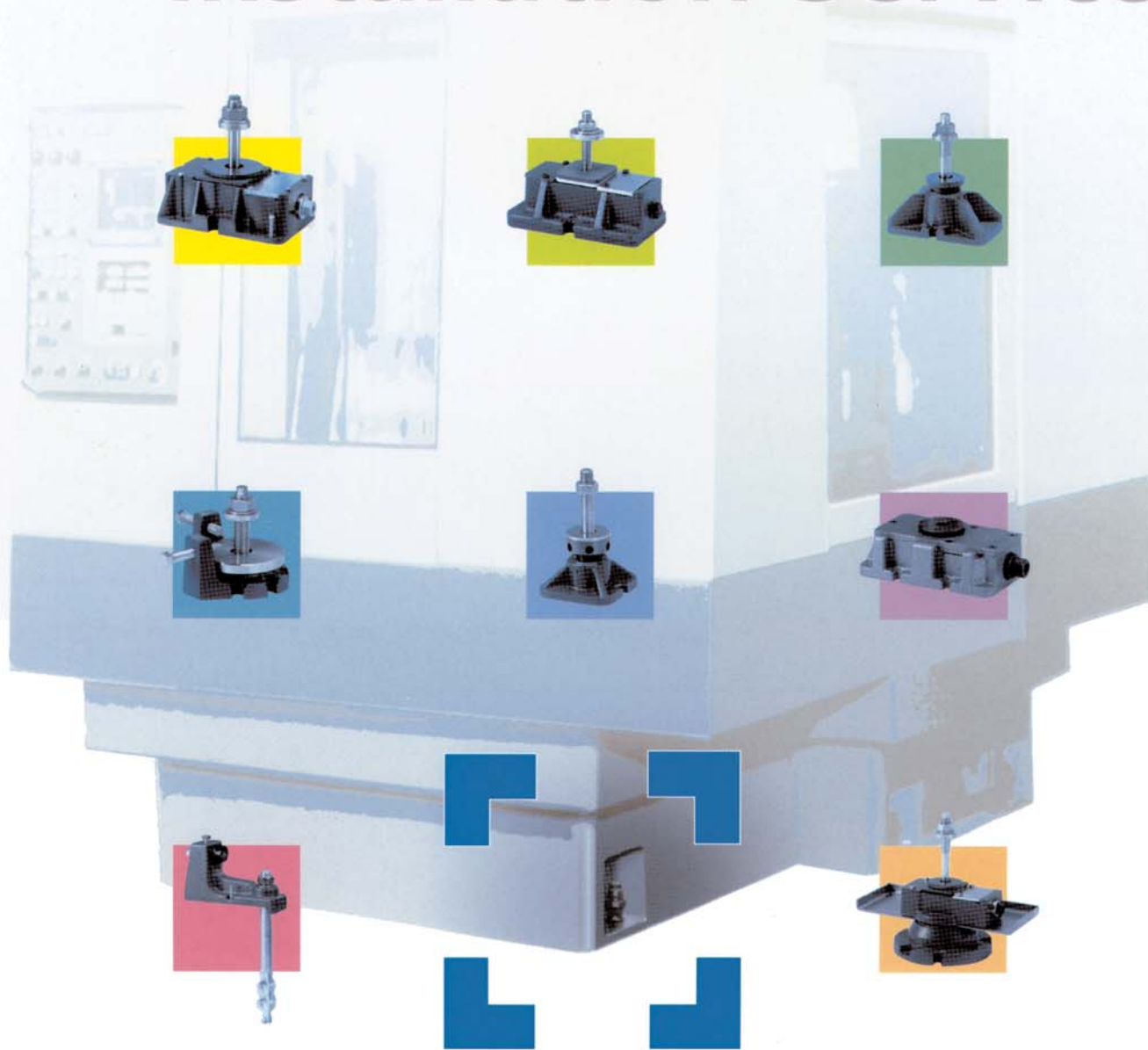


# BW-Fixatoren®

## Installation Service



**BWF**  
*...the best for accuracy.*

# The Pre-installation of BW-Fixators

## The advantages:

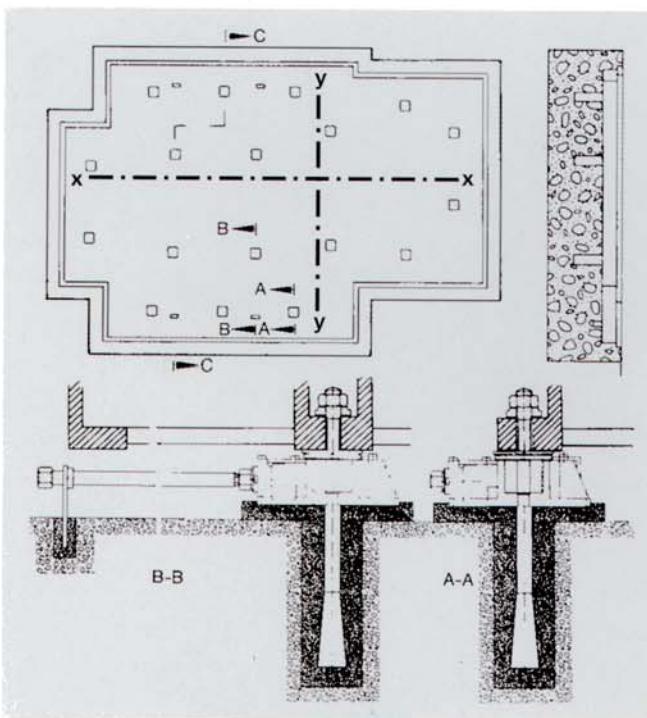
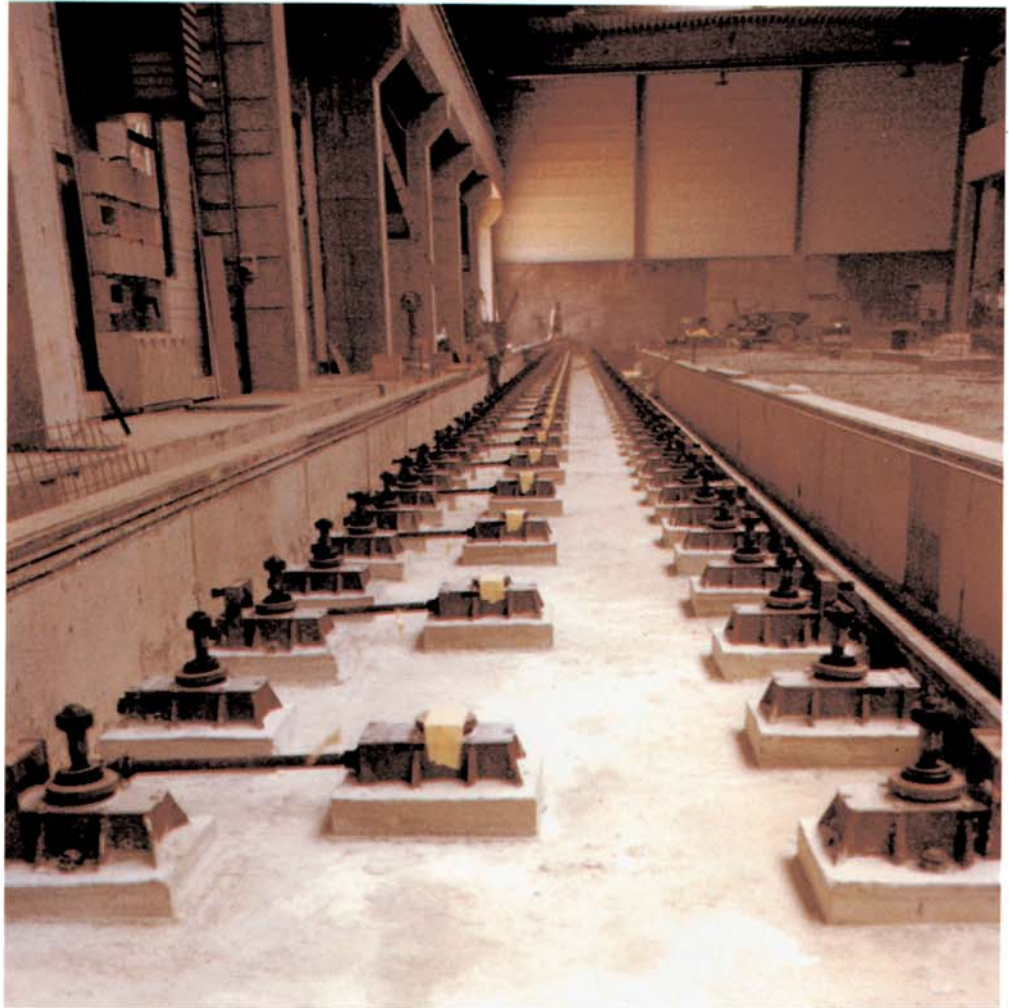
After delivery to site the machine is immediately installed and levelled

There is no time lost on site waiting for grout to harden

The position of the machine is already fixed

Accurate pre-levelling of each BW-Fixator means machines are level to 1/10 mm making final levelling very quick and easy

Important reduction in installation times and costs



## We require:

- Certified installation plan, which shows the positions of the main axis on the foundation in relation to the main features of the building, position of each BW-Fixator dimensioned to machine co-ordinate system and the thickness of the machine flange at each BW-Fixator position.
- The foundation must be cleaned
- The building must be watertight with the internal temperature higher than 10° C
- Connections for electric power and water
- Adequate lighting

Accuracy – x/y = +/- 1.0 mm and z = +/- 0,5 mm

Grouting the BW-Fixators is done by our own engineers using a nonshrink grout such as Pagel V1 Grout

We install around 20 to 25 BW-Fixators per day

# Installation of the BW-Fixators before the machine is on site



Drilling anchor holes with a core drilling machine



Positioning the BW-Fixators using a co-ordinate system – steel wire attached to support brackets



Each BW-Fixator is positioned by measuring back to the same reference axis which eliminates measurement errors



Completed group of BW-Fixators with machine bed installed

## To prepare a quotation we require the following information

- Quantity and size of the BW-Fixators
- Information on the foundation construction – one level or multiple levels
- Site location - town or city and country
- Have we to core drill the anchor holes

# BW-Fixatoren

## Levelling Procedure

(See Installationservice!)

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.  $\pm 0,02$  mm.
3. Use an ordinary hex head wrench to tighten the anchor bolt nuts BY HAND (see table)
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).
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-levelling some time later, repeat such upward adjustments, if possible, against the tightened anchor bolt nuts.
7. If the "upward" levelling of the machine should be impracticable or uneconomical ( if only one point must be levelled 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.

**Note :**

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.**

<b>BW - Fixator RK</b>  <b>Special Parameters for Set Screws and BW-Fixators of the RK Serie</b>  Anchor bolt							
	Dim Ø	RK I M16	RK II M20	RK III M24	RK IV M30	RK V M36	RK V M42
1. Hight adjustment per turn with the set screw	mm	0,25	0,25	0,29	0,35	0,43	0,43
2. Maximum torque permissible at the set screw	Nm	27	36	96	160	385	385
3. Specific torque at the anchor bolt nut	$\frac{Nm}{10^3 kg}$	27	34	40	50	60	70
4. Torque determinated at a hand-tightened anchor bolt nut	Nm	70	130	160	250	320	400
5. Prestressing force at a hand-tightened anchor bolt nut	$N \times 10^3$	26	38	40	50	53	57
6. Increase in prestressing force by one turn of the set screw against a hand-tightened anchor bolt nut	$N \times 10^3$	18	20	27	48	66	100
7. Total prestressing force (add 5 and 6)	$N \times 10^3$	44	58	67	98	119	157
8. Torque at the anchor bolt nut at the yield point of the anchor bolt	Nm	140	270	450	900	1600	2700
9. Prestressing force at the yield point of the anchor bolt	$N \times 10^3$	53	81	115	182	265	385