

# FERROVAC GMBH

ULTRA HIGH VACUUM TECHNOLOGY

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## PA40HEX, PA63HEX Hexapod Port Aligner

## Alignment Manual

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*28.11.2012*

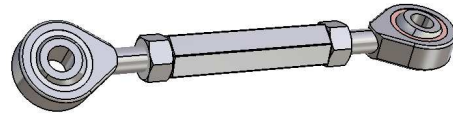
## Introduction

This short manual contains instructions for the correct adjustment of a Hexapod Port Aligner. Please read them carefully and follow them precisely to prevent any damage.

## Adjustable Support Unit

The adjustable support unit consists of a left/right threaded turnbuckle sleeve, two accordingly threaded joint-heads and two counter nuts.

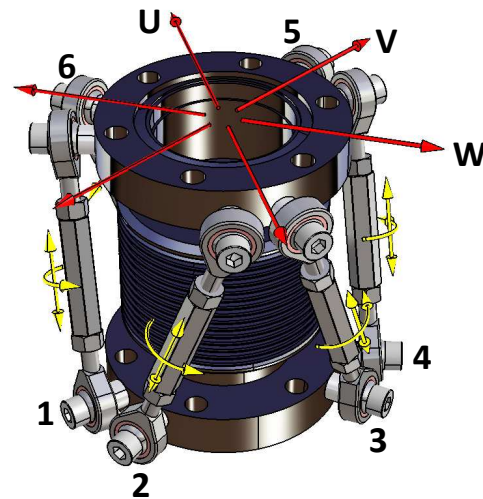
By loosening the counter nuts and screwing the threaded turnbuckle in clockwise direction, the distance between the two joint-head bore axis is shortened. Screwing it in counterclockwise direction will lengthen the support unit.



## Lateral Adjustment

For lateral translation in U-, V- or W- axis adjust the oppositely arranged support units according to the instructions above.

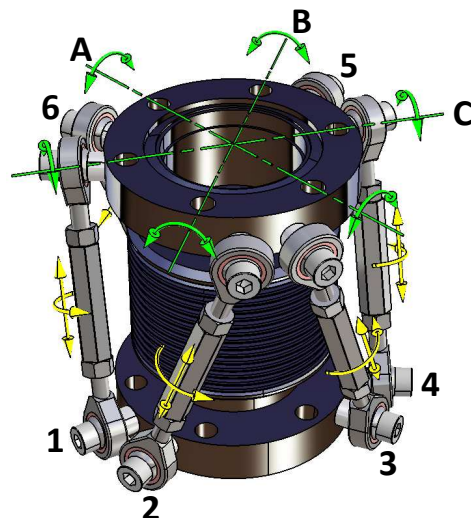
| axis | support unit |
|------|--------------|
| U    | 1 and 4      |
| V    | 2 and 5      |
| W    | 3 and 6      |



## Angular Adjustment

For angular rotation around the A-, B- or C- axis adjust the oppositely arranged support unit pairs.

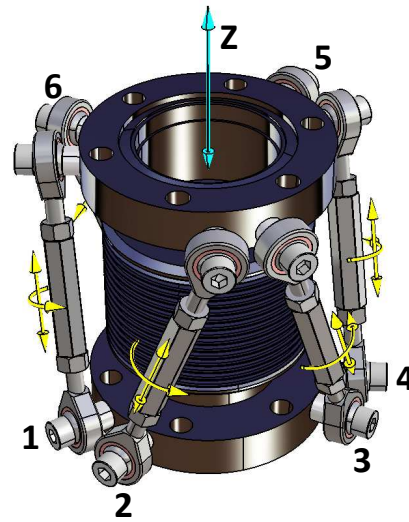
| axis | support unit                       |
|------|------------------------------------|
| A    | lengthen 1 and 2 / shorten 4 and 5 |
| B    | lengthen 3 and 4 / shorten 6 and 1 |
| C    | lengthen 2 and 3 / shorten 5 and 6 |



### Lengthwise Adjustment

For linear translation along the Z-axis adjust the support unit pairs in their length one by one.

| axis | support unit   |
|------|--|
| Z    | lengthen 1 and 2,<br>than lengthen 3 and 4,<br>than lengthen 5 and 6 |



### Incorrect Adjustments

Never adjust the support units at the same time given below. This can cause torsional load and damage the bellows. When adjusting the Hexapod Port Aligner always keep an eye on the bellows to be aware of unusual bellows movements and prevent serious damage.

| axis                  | support unit   |
|-----------------------|--|
| Incorrect adjustments | 1 and 3<br>2 and 4<br>3 and 5<br>4 and 6<br>5 and 1<br>6 and 2 |

