

FERROVAC

ULTRA HIGH VACUUM TECHNOLOGY

PA40HEX, PA63HEX,
PA100HEX, PA160HEX,
PA250HEX

Hexapod Port Aligner

Alignment Manual

31.07.2024

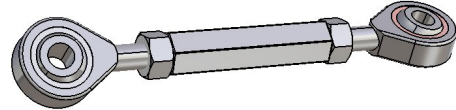
Introduction

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.

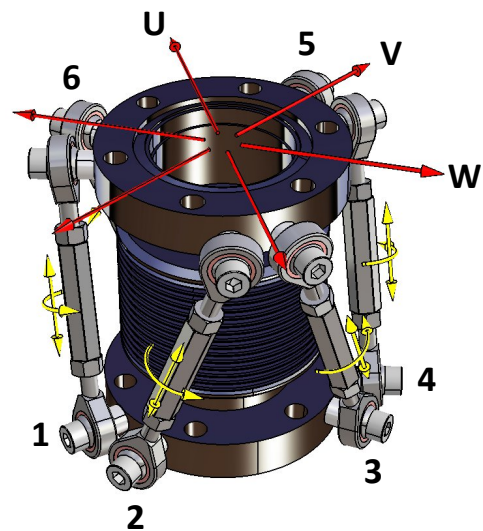
By loosening the counter nuts and screwing the threaded turnbuckle in a clockwise direction, the distance between the two joint-head bore axes is shortened. Screwing it in a counterclockwise direction will lengthen the support unit.



Lateral Adjustment

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

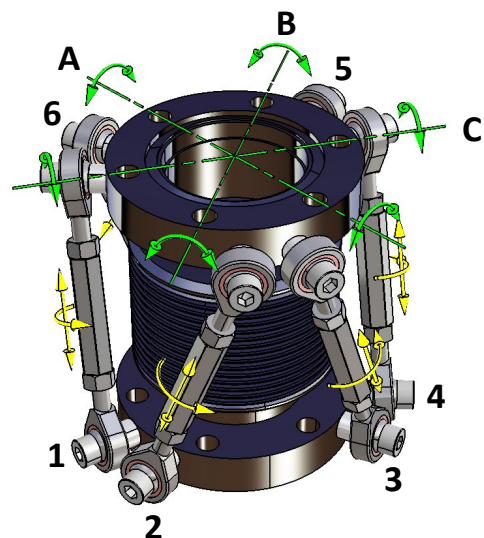
| axis | support unit |
|------|--------------|
| U | 1 and 4 |
| V | 3 and 6 |
| W | 2 and 5 |



Angular Adjustment

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

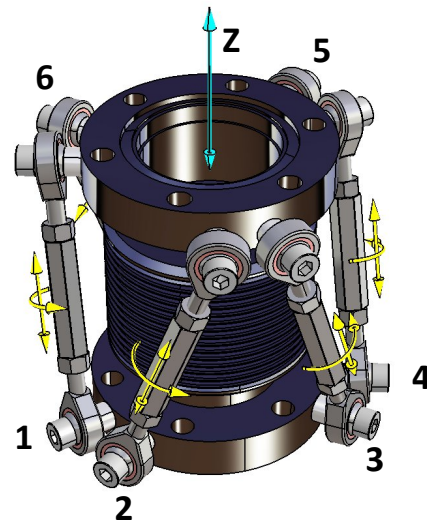
| axis | support unit |
|------|------------------------------------|
| A | lengthen 1 and 2 / shorten 4 and 5 |
| B | lengthen 3 and 4 / shorten 6 and 1 |
| C | lengthen 2 and 3 / shorten 5 and 6 |



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, than lengthen 3 and 4, than lengthen 5 and 6 |



Incorrect Adjustments

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

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

