

Installation and Operating Instructions

1. Security Advice:

Caution:
Please read the complete documentation carefully before starting the set-up operation!



1.1. Depending on the type of application danger will be caused by:

- Contusion during installation caused by unsecured connecting construction
- Improper pneumatic connections
- Malfunction of pneumatic supply caused by pressure fluctuations
- Loose pneumatic connection
- Loose attachment screws
- Not turning off the operating instrument during installation or repair works at the clamping element
- Human malpractice
- Non-observance of the information and warning facilities during installation and the set-up operation

Installation instructions have to be followed and the necessary equipment and supplies have to be used during installation, modifications, maintenance and repair. Throughout every working process on the clamping elements the appropriate accident prevention regulations, VDE security and installation instructions have to be followed.

1.2. The application of the clamping elements – in accordance with regulations – implies that this technology will be utilized exclusively in consideration of the realm of possibilities defined by technical specification. All different ways of use exclude further liability of the Zimmer GmbH.

2. The Model UBPS Clamping and Braking Element (with spring storage)

The element is preset to the appropriate LM guide gauge ex factory. The contact sections are pressed onto the non-attached areas of the LM guide. Therefore the process of clamping does not influence the precision and the economic life-time of the LM guide.

2.1. Operational area:

The UBPS model is designed for static and dynamic clamping. The elements are licensed for 2000 breaking processes. The use of specific friction lining prevents LM guide damage with dynamic usage. Short reaction rates are guaranteed by the implemented quick-action ventilating valves. The additional pressurizing on the side of the piston rod, termed as PLUS-connection from now on, can increase the clamping power significantly.

- max. surrounding temperature 70°C
- pneumatic operating pressure min 5.5 bar, max. 8 bar

3. UBPS and UBPS-PLUS-Version

The model UBPS can be operated as a plain spring storage element or as a pressure supported spring storage element (PLUS-connection).

Fig.1 Diagram of Connection

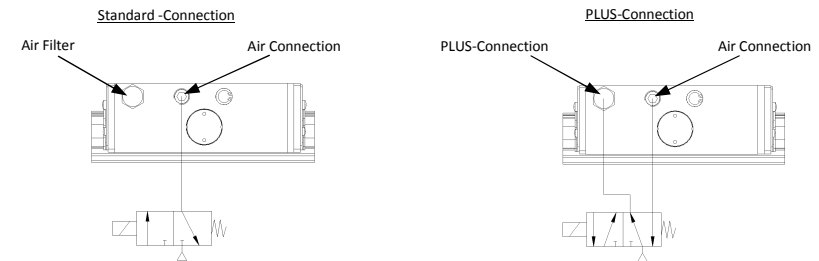
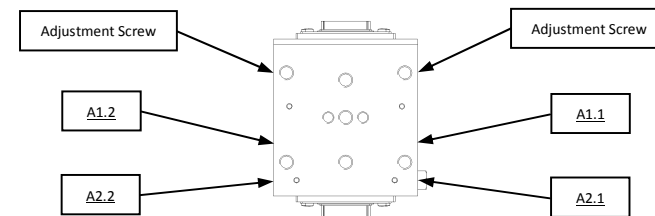


Fig.2 Notation of Connections



3.1. Air Filter / quick-action ventilating valve

The air filter is mounted according to standard in A2.1.
Depending on the application the air filter can be mounted in A2.2. Therefore the interexchange of the air filter and the opposite closing plug becomes necessary.
Caution: In the case of a Standard-Connection (Fig.1 Diagram of Connections) the clamping element must not be operated without the air filter (destruction of the clamping element).
In order to guarantee a short-ranged reaction rate the air filter and the quick action ventilation valve (Fig.3) must not be concealed by the connecting construction.

3.2 PLUS-Version

The application of the PLUS-Version strictly requires the removal of the air filter. The connection has to be replaced with the connection A2 (Fig.3) or with the closing plug A2.2 which was removed from the opposite side.

3.3. For a transportation lock, the spring energy storage is pre-stressed by a spacer between the contact sections.

Caution:

It is permitted to remove the transportation lock, only if the air connection is pneumatically pressurized to at least 5.5 bar according to instructions.

It is permitted to release pressure from the clamping element, only if an associated guide rail or a transportation lock exists!

4. Installation Instructions

4.1. General:

For mounting the clamping elements, used screws have to comply with the category of solidity of min. 8.8. Attachment screws have to be tightened with the required moment. (Tab.1 and Tab.2)



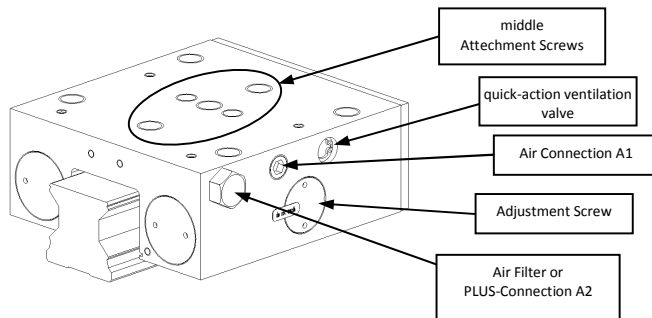
The accessibility of the elements has to be warranted, so that the abrasion parts can be changed without a major difficulty.

Caution: The attachment screws (Fig.3) in the middle do have a significant influence on the rigidity of the clamping element. The maximum holding load will only be obtained by using minimum two of the attachment screws in the middle in conjunction with a rigid connecting construction. Furthermore the connection construction must cover the complete connection surface of the clamping element.

4.2. Installation / Uninstallation:

- install pneumatic connections, if necessary install PLUS-connection
- pressurize air connection A1 (A1.1 or A1.2) with pneumatic pressure min 5.5 bar (the clamping element is open)
- remove transportation lock between contact sections
- pay attention to cleanliness and evenness of the mounting areas
- mount clamping element together with the guiding slide at the connecting construction
- turn the screws into the attachment threads and only apply the screws
- with stop: clamping element has to abut to the edge of the stop (edge of the stop is used as stop assistance) without stop: center the clamping element by depressurizing
- Attachment screws have to be tightened with the required moment (Tab.1)
- pressurizing of the clamp element to 5.5 bar
- tighten attachment screws of the dirt wiper (supplies)

Fig.3



5. Operational Test

5.1. After the appropriate installation of the clamping element the operating readiness has to be tested

The mobility has to be tested by manually moving the slide.

The process of clamping has to be tested by manually moving the connecting construction.

The appropriate mounting of the fixed and flexible pneumatic pipe installation has to be tested by visual control.

All pneumatic connections at the pressurized element have to be visually checked for leakage.

All attachment screws have to be checked for their required moment. (Tab.1)

5.2. Readjusting

After appropriate installation, readjusting will not be necessary because the contact sections are preset ex factory.

Open the clamping element

Pressurize the pneumatic connection A1 of the clamping element to 5.5 bar.

Tighten adjustment screws clockwise until the contact section suits. (supplies, adapter)

Caution: Both adjustment screws have to be screwed in identically and subsequently have to be screwed back to an angle of 15°.

Start operational test.

For further information, please contact our technical service: +49/7844/9138-0

Non-observance of the installation and operating instruction causes the guarantee to expire.

6. Technical Data

Table 1 UBPS

Size	Connection	estimated Consumption per Cycle at 6bar [cm³]	estimated PLUS-Consumption per Cycle at 6bar [cm³]	Attachment Screw Category of Solidity 8.8	tightening Torque [Nm]
25	M5	80	165	M6/M8	9,5/23
30	M5	111	274	M8/M10	23/46
35	G1/8"	139	303	M8/M10	23/46
45	G1/8"	153	483	M10/M12	46/79
55	G1/8"	554	952	M14	125
65	G1/8"	554	952	M16	195

Data concerning air consumption is approximate.

Technical modifications reserved.

**Typ:
UBPS**

Version 07.05.2014

Clamping Elements



Manufacturer's Statement

in terms of the EC – Machinery Directive 98/37/EG, Appendix II B

Herewith we certify that the type of construction

Product's Name: Clamp Element

Part Number: UBPS

is – in its delivered version - intended to be installed into a machine or for the assembly with other machines in order to create a new machine, and that its start-up is prohibited until it is proved that the machine, in which the above-named machine shall be integrated, corresponds to the EC – Machinery Directive 98/37/EG.

A handwritten signature in black ink, appearing to read "Ulrich Fi".

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legally binding signature (business management)