Typ: TPS 050-090 Version 08.05.2014	clamping element	ZIMMER group

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 TPS (pneumatic with spring energy storage)

2.1. Operational area:

The TPS model is designed for static clamping of rotary motion. The elements are not suitable for the dynamic application. The elements are licensed for velocities up to 1000U/min.

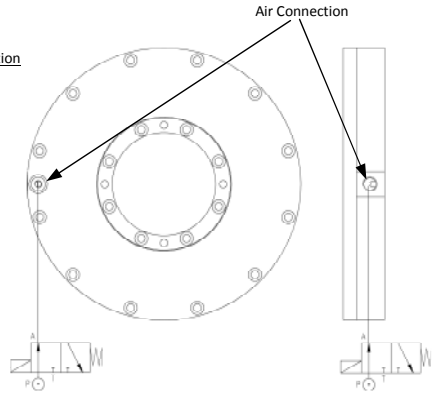
- max. surrounding temperature 70°C
- pneumatic operating pressure min 4 bar, max. 8 bar

3. TPS

The Model TPS can be operated as a plain spring storage element

Fig. 1 Diagram of Connection

Standard -Connection



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)

The accessibility of the elements has to be warranted.

4.2. Installation / Uninstallation:

- Removal of the plastic blanking plug
- attachment of M5 resp. G1/8“ pneumatic connections
- Relieve pressure from model TPS
- Set clamping element with cylinder bolt on the round shaft
- Tight the screws of the inside turntable in the connection threads and pull them with given torque (Tab.1)
- Tight the screws of the housing (external) into the connection thread and pull them easy.
- Stretch class the model TPS by pressure discharge, the element is thereby centred
- Attachment screws have to be tightened with the required moment (Tab.1)
- For uninstalling perform in reverse order

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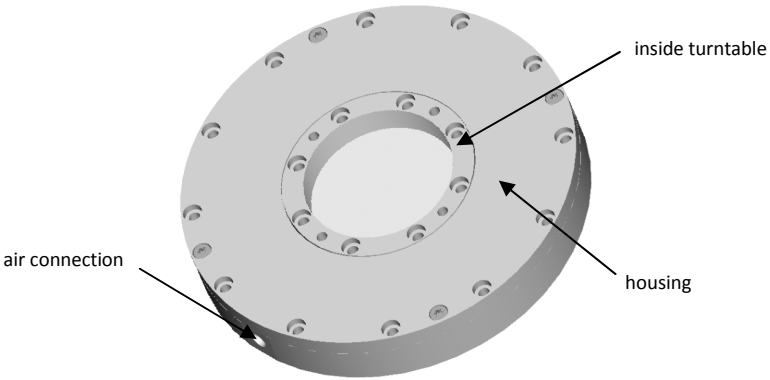

5. Operational Test

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 round shaft.
The process of clamping has to be tested by manually turning of 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)

For further information please contact our technical service: 0049/7844/9138-0

6. Technical Data

Table 1

size	connection	estimated consumption per cycle at 4 bar [cm³]	attachment screws category of Solidity 8.8	tightening torque [Nm]
Ø 50	M5 / G1/8“	0,17	M 5	9,5
Ø 60	-	-	-	-
Ø 70	-	-	-	-
Ø 80	-	-	-	-
Ø 90	M5 / G1/8“	0,18	M 5	9,5

values count only to standard-clamping elements.
data concerning air consumption is approximate.
technical modifications reserved.

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: TPS

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.

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legally binding signature (business management)