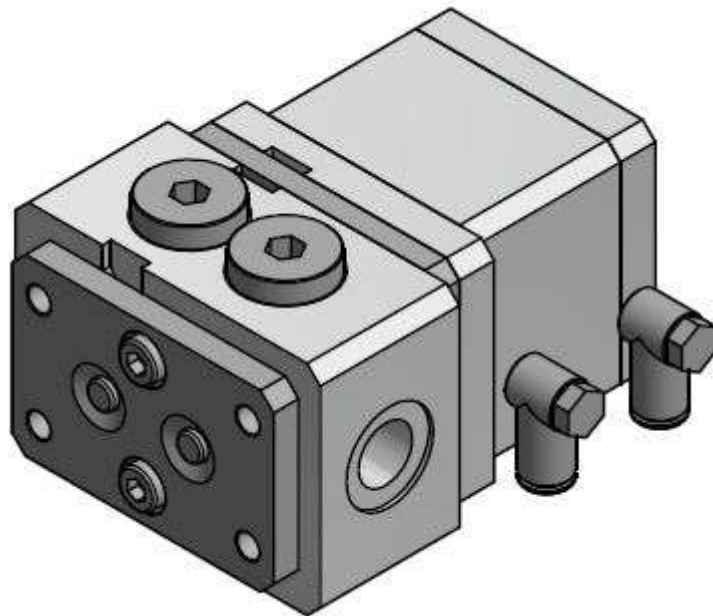


# Operating and Maintenance Instructions

## Two-Component Valve



**Valid from:  
05/07/2019**

**Article no. 0001-9450-0000**

**Original operating instructions in German.  
Keep for future use!**

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# Operating and Maintenance Instructions

## Two-Component Valve



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## 1.0.0 Introduction

### 1.1.0 Target group

These Operating and Maintenance Instructions are intended for the operators and maintenance staff (=expert staff).

### 1.2.0 Structure of the Operating and Maintenance Instructions

The Operating and Maintenance Instructions are subdivided into various chapters (see Table of Contents).

#### 1.2.1 Text structure

The text information is divided into various levels

1.0.0 Chapter heading (1<sup>st</sup> level)

1.1.0 Subheading (2<sup>nd</sup> level)

1.1.1 Sub-headlines (3<sup>rd</sup> level)

Safety, process, activity or information texts

Activities needing to be performed in a specific order are shown in steps. This means that step 1 needs to be performed before step 2.

#### **Example:**

1. Open high-pressure valve XY.
2. Push button XY and wait until ....
3. Insert material .....

#### 1.2.2 Co-Applicable Instructions

None

### 1.3.0 General Advice

Technical advancements may cause the illustrations in these Operating and Maintenance Instructions to deviate from the delivered variant. This will not necessarily lead to changes in these Operating and Maintenance Instructions.

### 1.4.0 Guarantee and Liability

These Operating and Maintenance Instructions have been created with the greatest possible care. All the information and advice on the operation and maintenance are provided on the basis of our experiences and findings so far, and to the best of our knowledge.

These Operating and Maintenance Instructions, including the text and illustrations, correspond with the state of the art at the time of going to print. The contents of the Operating and Maintenance Instructions do not establish any claims on the part of the buyer. Should they be found to be incomplete or still contain errors, please let us know so that we can correct them, also in your own interest.

Please see your order confirmation for information on the guarantee and liability periods for this system/machine. Wearing parts are excluded.

Warranty and liability claims for injuries and property damage are excluded insofar as attributable to the following causes:

- Improper use of the two-component valve
- Improper operation and maintenance of the two-component valve
- Operation of the two-component valve with defective or not fully functional parts and assemblies
- Failure to comply with the operating instructions in every detail
- Unauthorized structural changes or changes of the performance data
- Inexpert repairs
- Force majeure
- Interferences with and changes to the two-component valve's mechanical or pneumatic components that have not been authorized by the manufacturer.

# Operating and Maintenance Instructions

## Two-Component Valve



### 1.5.0 Copyright

These Operating and Maintenance Instructions and all documents included with them are the intellectual property of t-s-i.de Misch- und Dosiertechnik GmbH.

The copyright for this documentation remains with us (t-s-i.de Misch- und Dosiertechnik GmbH). The instructions and technical drawings in this documentation must not be copied or forwarded to third parties without our consent, neither in whole nor in parts.

### 1.6.0 Manufacturer Information

#### Manufacturer service line and hotline

t-s-i.de Misch- und Dosiertechnik GmbH  
Georg-Fleischer-Strasse 6  
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### 1.7.0 Type Plate



#### Introduction

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## 2.0.0 Safety – Accident Prevention

### 2.1.0 Warnings and Special Information

The operating instructions use the following labels for safety advice and information:

#### **DANGER!**



Stands for a directly impending risk. Non-compliance with this information can lead to grave injury or death.

#### **WARNING!**



Stands for a potentially dangerous situation. Non-compliance with this information can lead to serious injury.

#### **CAUTION!**



Stands for a potentially dangerous situation. Non-compliance with this information can lead to minor injuries.

#### **ATTENTION!**



Special instructions and prohibitions for damage prevention.

#### **ADVICE!**



Special information on economic use and important additional information.

# Operating and Maintenance Instructions

## Two-Component Valve



### 2.2.0 Intended Use

- The two-component valve is exclusively designed for processing (liquid and pasty) solvent-free two-component sealants and two-component adhesives. All uses over and beyond this count as improper! The manufacturer/supplier will not accept any liability for any damages resulting from them. The risk is exclusively borne by the user.
- Before using the two-component valve for any other purposes than the ones described above, please consult the customer service of t-s-i.de Misch- und Dosiertechnik GmbH as the guarantee will expire otherwise.
- The intended use also includes compliance with the Operating and Maintenance Instructions and compliance with the inspection and maintenance requirements.
- The two-component valve must only be operated, set up, cleaned, serviced and repaired by persons who have been trained for this.
- The two-component valve must only be used with the original accessories supplied by t-s-i.de Misch- und Dosiertechnik GmbH.

#### **ATTENTION!**



**Operating errors or misuse can jeopardize:**

- **Life and limb**
- **Material assets**
- **The efficient function of the machine/system**

### 2.3.0 Improper use

Everything going beyond the intended use described here.

# Operating and Maintenance Instructions

## Two-Component Valve

### 2.4.0 Safety Advice – Accident Prevention

#### 2.4.1 Residual Hazards

The two-component valve is designed in accordance with the state of the art and recognized safety standards. Compliance with applicable OHAS and accident prevention regulations is assumed. The following residual hazards apply nonetheless:

#### CAUTION!



#### RISK OF INJURY!



- **Wear Goggles**

#### 2.4.2 Personal Protective Equipment

- The use of the following protective equipment is mandatory:

#### ATTENTION!



**Always wear goggles when working.**



### 2.4.3 Further Safety Advice

#### ATTENTION!



- Read and heed all **Safety Advice** in these **Operating and Maintenance Instructions**.
- Repairs must only be performed by **authorized expert staff**. Faulty repairs can lead to **injury** for the operating staff and/or to the **destruction** of the two-component valve.
- **Before working with it**, learn how to operate the two-component valve and familiarize yourself with its control elements. Let **NOBODY** operate the two-component valve without previous training.
- Have **damages** of the two-component valve repaired immediately or report them to the responsible body without delay. Operation of the two-component valve with technical defects is prohibited.
- **Unauthorized changes** of components and/or default settings of the two-component valve can lead to malfunctions that may affect your safety and can shorten its lifetime.

### 2.5.0 Operator Workplace

The **two-component valve** serves to process (liquid or pasty) solvent-free two-component sealants and two-component adhesives.

The operator of the **two-component valve** is tasked with:

- Applying the two-component sealants and/or two-component adhesives.

# Operating and Maintenance Instructions

## Two-Component Valve

### 2.6.0 Required Staff Qualifications

#### 2.6.1 Operation

**ATTENTION!** The operator needs to ensure that the two-component valve is only ever operate by persons who:



- Are familiar with the safety advice.
- Are familiar with the control elements.
- Have read and understood these Operating and Maintenance Instructions.

#### 2.6.2 Maintenance

**ATTENTION!**



Only by authorized expert staff.

#### 2.6.3 Pneumatic System

**ATTENTION!**



Only by expert staff trained in the area of pneumatics.

# Operating and Maintenance Instructions

## Two-Component Valve



### 3.0.0 Technical Data

#### 3.1.0 General Information

Length: ..... 95 mm  
Width: ..... 75 mm  
Height: ..... 55 mm  
Weight: ..... 780 g

#### 3.2.0 Pneumatics

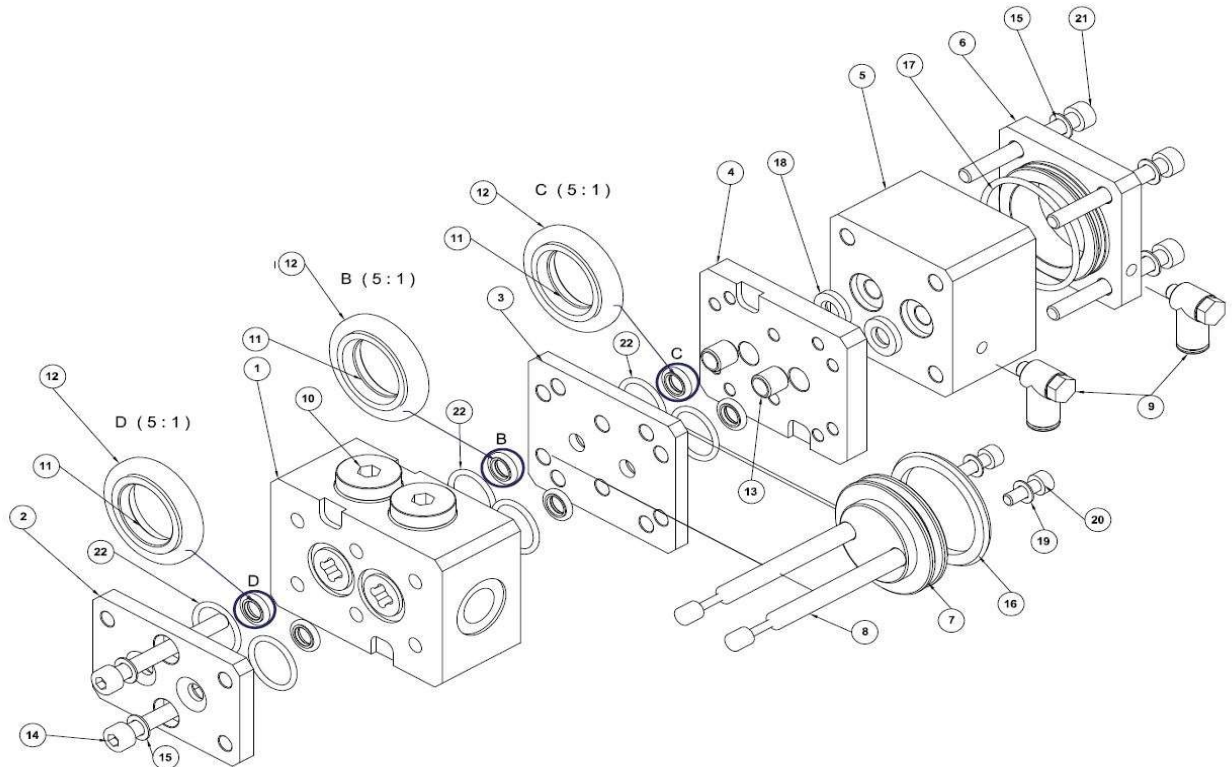
Working pressure: ..... 6-10 bar

#### Technical Data

# Operating and Maintenance Instructions

## Two-Component Valve

### 4.0.0 Description and Function



Part list 0001-9450-0000			
Item	Qty.	Name	Part number
1	1	Connection plate	0001-9450-0008
2	1	Sandwich plate	0001-9450-0002
3	1	Sandwich plate	0001-9400-0013
4	1	End plate	0001-9400-0008
5	1	Cylinder casing	0001-9400-0004
6	1	Cylinder cover	0001-9400-0005
7	1	Piston	0001-9400-0006
8	2	Piston rod	0001-9450-0007
9	2	Elbow union	0003-0003-4M5
10	2	Plug screw	0001-0001-VST11 4x3/2
11	6	Gasket	0005-0002-0023
12	6	O-ring	0005-0001-0041
13	2	Bushing	0009-0003-0047
14	2	Cylinder screw	0002-0912-05x045
15	6	Screw lock	0002-0530-05
16	1	Piston seal	0005-0002-0029
17	1	O-ring	0005-0001-0038
18	2	Rod seal	0005-0002-0028
19	2	Screw lock	0002-0530-04
20	2	Cylinder screw	0002-0912-04x012
21	4	Cylinder screw	0002-0912-05x045
22	6	O-ring	0005-0001-0037

Part list sealing set 0001-9450-0500			
Item	Qty.	Name	Part number
11	6	Gasket	0005-0002-0023
12	6	O-ring	0005-0001-0041
16	1	Piston seal	0005-0002-0029
17	1	O-ring	0005-0001-0038
18	2	Rod seal	0005-0002-0028
22	6	O-ring	0005-0001-0037

(The larger diameter of gasket no. 11 always needs to face the material pressure side. In this valve, these gaskets from Detail B and C are thus installed with the large diameter facing part no. 2, and the gaskets from Detail D with the large diameter facing part no. 6).

#### Description and Function

# Operating and Maintenance Instructions

## Two-Component Valve



### 4.1.0 General Description

The two-component valve has been developed for processing and metering (liquid or pasty) two-component adhesives and sealants and offers you massive benefits , e.g.:

- a long pot life
- easy maintenance
- high resilience against aggressive materials and corrosion
- minimal material losses

### 4.1.1 Application

The two-component valve can be optionally mounted on various platforms:

- on a stand
- on a portal
- on a robot

A special handle is available for applications where the valve is meant to be hand-held.

The maximum material pressure is 360 bar (dependent upon system).

#### Description and Function

### 4.2.0 Metering Valve Function

The two-component valve has an ON/OFF function. The media to be metered are supplied by way of the pump system.

The ON/OFF function of the valve is controlled by way of the piston movement inside the cylinder.

In the OFF position, the piston is retracted and the two piston rods push into the front gaskets inside the sandwich plate.

In the ON position, the piston and piston rods are pushed to the front and components A and B flow through the material junction separately.

# Operating and Maintenance Instructions

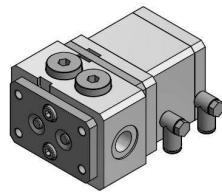
## Two-Component Valve

### 4.3.0 Installation

#### 4.3.1 Connecting the Supply Tubes

The material tubes A and B need to be attached at the side of the valve.

**B**



**A**

#### ADVICE!



Keep material tubes A and B as short as possible and install a non-return valve if possible.

#### 4.3.2 Fixed Setup

In a fixed setup, the air tubes are both attached to the side of the cylinder.

- Back pneumatic connection for opening
- Front pneumatic connection for closing

#### ADVICE!



The minimum pressure required inside the air tubes is 0.6 bar.

#### 4.4.0 Start

Before starting, check if:

- the air tubes are connected?
- the material tubes are connected?
- pressurized air is being supplied?

#### Description and Function



# Operating and Maintenance Instructions

## Two-Component Valve



### 4.4.1 Manual Work

1. Let out the material separately and clean the material outlet, if required
2. Flush the air from material tubes A + B and the material valve.
3. Fix disposable mixer in place on material junction:

### 4.4.2 Fixed Setup

1. Mount the material valve on a swivelling mount.
2. To flush it, hold the valve with the mixer facing up and meter the liquids A and B.
3. Let the material out.
  - If the mixing looks OK, you can start with the application.

#### Description and Function

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### 4.5.0 Maintenance

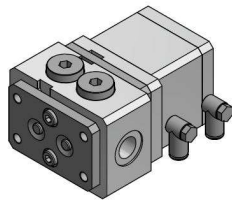
#### ATTENTION!



The maintenance activities below are **MANDATORY**.

### 4.5.1 Routine Maintenance

1. Depressurize material tubes A and B.
2. Remove the material junction and clean it with a suitable solvent.



### 4.6.0 Disassembly and Cleaning

1. To clean the piston rods, depressurize material tubes A and B first.
2. Remove the material junction.
3. Clean the piston rods with a suitable brush or a solvent-soaked cloth.

#### CAUTION!



**EYE INJURIES!**



• **Goggles are MANDATORY!**

4. If required, (e.g. leaks), the material valve needs to be completely disassembled and the gasket kit replaced.

### 5.0.0 Disposal

#### ATTENTION!



- The disposal needs to comply with all currently known regulations for metals, plastics, electrical or electronic components, fats, oils, etc.
- Have possibly required disassembly work performed by expert staff.