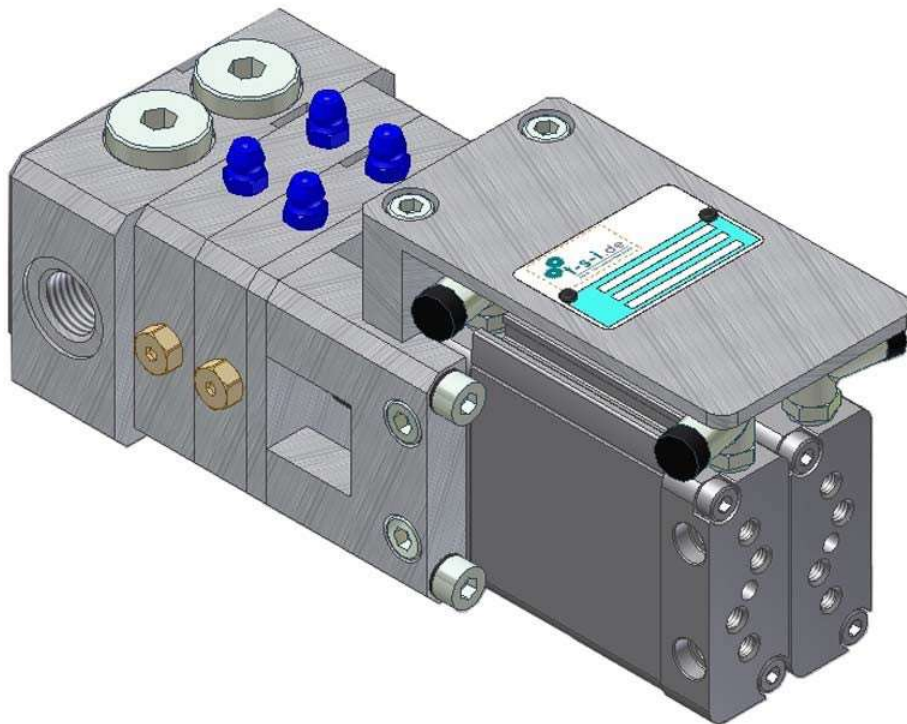


Operating and Maintenance Instructions

2C Material Valve with 2 Cylinders



Valid from: 15/02/2018

Article No. 0001-9800-0000

**Translation of the original instructions in German.
Keep for future use!**

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1.0.0 Introduction

1.1.0 Target group

These operating and maintenance instructions are intended for the operators and the maintenance personnel (= skilled personnel).

1.2.0 Layout of the operating and maintenance instructions

The operating and maintenance instructions are divided into various sections (see Table of Contents).

1.2.1 Text structure

The text information is subdivided on several levels:

1.0.0 Section heading (1st level)

1.1.0 Subheading (2nd level)

1.1.1 Sub-subheadings (3rd level)

Safety, process, action or information texts.

Procedures, which must be carried out in a specific order, are described step-by-step. This means that step 1 must be completed before step 2.

Example:

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

1.2.2 Other applicable instructions

None

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1.3.0 General note

Further technical developments mean that descriptions and illustrations in these operating and maintenance instructions may differ in detail from the version delivered. This does not necessarily lead to a change to these operating and maintenance instructions.

1.4.0 Warranty and liability

These operating and maintenance instructions have been written with the greatest possible care. All information, notes and instructions for the operation and maintenance are provided taking into consideration our experience, lessons learned and to the best of our knowledge.

The text and figures in these operating and maintenance instructions correspond to the state-of-the-art on printing. The contents of the operating and maintenance instructions do not justify any claims whatsoever by the purchaser. Should incomplete information and/or errors nonetheless be found, in your own interest, please notify us so that we can make relevant corrections.

The duration of the warranty and liability for this system/machine is given on your order confirmation. Wearing parts are excluded.

Warranty and liability for personal injuries and damage to property are excluded if they are due to the following causes:

- Non-intended use of the 2C material valve with 2 cylinders
- Improper operation and maintenance of the 2C material valve with 2 cylinders
- Operating the 2C material valve with 2 cylinders with defective or not fully-functional parts and assemblies
- Failure to follow the operating instructions in all details
- Unauthorised structural changes or changes to the performance data
- Improperly carried out repairs
- Force majeure
- In case of interventions and changes to the mechanical or pneumatic components of the 2C material valve with 2 cylinders without the authorisation of the manufacturer.

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1.5.0 Copyright

These operating and maintenance instructions and all documents supplied are the intellectual property of t-s-i.de Misch- und Dosiertechnik GmbH. We (t-s-i.de Misch- und Dosiertechnik GmbH) retain copyright to this documentation. The regulations and technical drawings in this documentation may not be reproduced or forwarded to other persons, neither in full nor in part, without our prior consent.

1.6.0 Manufacturer details

Manufacturer's service department and hotline

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1.7.0 Nameplate



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Introduction

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2.0.0 Safety - Accident Prevention

2.1.0 Warnings and special information

The following names are used in the operating instructions for safety instructions and information:

DANGER!



Indicates an imminent danger. Disregard of the instruction/information can cause fatal or serious injuries.

WARNING!



Indicates a potentially dangerous situation. Disregard of the instruction/information can cause serious injuries.

CAUTION!



Indicates a potentially dangerous situation. Disregard of the instruction/information can cause minor injuries.

ATTENTION!



Particular requirements and prohibitions to prevent damage.

NOTE!



Particular information regarding economical use and important additional information.

2.2.0 Intended use

- The **2C material valve with 2 cylinders** is solely designed to be used to process and apply solvent-free two-component sealants and two-component adhesives (liquid and pasty). Any other or further use is deemed not to be intended use! The manufacturer/supplier is not liable for any resulting damage or losses. The risk is borne solely by the user.
- Before the **2C material valve with 2 cylinders** is used outside the area of use described above, the customer service of t-s-i.de Misch- und Dosiertechnik GmbH must be consulted, as otherwise the warranty is cancelled.
- Intended use also includes following the operating and maintenance instructions and compliance with the inspection and maintenance conditions.
- The 2C material valve with 2 cylinders may only be operated, set up, cleaned, maintained and repaired by trained persons.
- The 2C material valve with 2 cylinders may only be used with original accessories of t-s-i.de Misch- und Dosiertechnik GmbH.

ATTENTION!



Faulty operation or misuse can cause risks to:

- **life and limb;**
- **property;**
- **efficient working of the machine/system.**

2.3.0 Improper use

Everything that extends beyond the described intended use.

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2.4.0 Safety instructions - accident prevention

2.4.1 Residual risks

The **2C material valve with 2 cylinders** has been built to state-of-the-art standards and recognised safety rules. Compliance with the relevant occupational safety and accident prevention regulations is assumed. Nonetheless, the following residual risks exist:

CAUTION!



RISK OF INJURY!



- **Wear safety glasses/goggles.**

2.4.2 Personal protective equipment

- Use of the following protective equipment is absolutely necessary:

ATTENTION!



Always wear safety glasses/goggles when working.

2.4.3 Further safety instructions

ATTENTION!



- Read and follow all safety instructions in these operating and maintenance instructions and on the 2C material valve with 2 cylinders (safety symbols).
- A repair may only be carried out by skilled personnel assigned to do so. Incorrectly carried out repairs can lead to injury of the operating personnel and/or irreparable damage to the 2C material valve with 2 cylinders.
- Before starting to work with the 2C material valve with 2 cylinders, learn how to operate it and familiarise yourself with its controls. Allow NO ONE to operate the 2C material valve with 2 cylinders without receiving prior instruction.
- Have any damage to the 2C material valve with 2 cylinders corrected immediately or report it to the responsible person/department. It is prohibited to operate the 2C material valve with 2 cylinders while it has technical defects.
- Unauthorised changing of components or adjustment of the preset values at the 2C material valve with 2 cylinders can lead to malfunctions that can impair their safety and shorten the life of the 2C material valve with 2 cylinders.

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2.5.0 Job of the operator

The **2C material valve with 2 cylinders** is used to process and apply solvent-free two-component sealants and two-component adhesives (liquid and pasty).

The operator of the **2C material valve with 2 cylinders** is assigned:

- to apply the two-component sealants and two-component adhesives.

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2C Material Valve with 2 Cylinders

2.6.0 Required qualification of the employees

2.6.1 Operation

ATTENTION!



The owner/operating company must ensure that the 2C material valve with 2 cylinders is only operated by persons who:

- Are familiar with the safety instructions.
- Are familiar with the controls.
- Have read and understood these operating and maintenance instructions.

2.6.2 Maintenance

ATTENTION!



Only by assigned skilled personnel.

2.6.3 Pneumatic system

ATTENTION!



Only by skilled personnel who have received special pneumatics training.

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2C Material Valve with 2 Cylinders



3.0.0 Technical Data

3.1.0 General information

Length: 176 mm
Width: 70 mm
Height: 73 mm
Weight: 620 g

3.2.0 Pneumatics

Working pressure: 6-10 bar

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Technical data

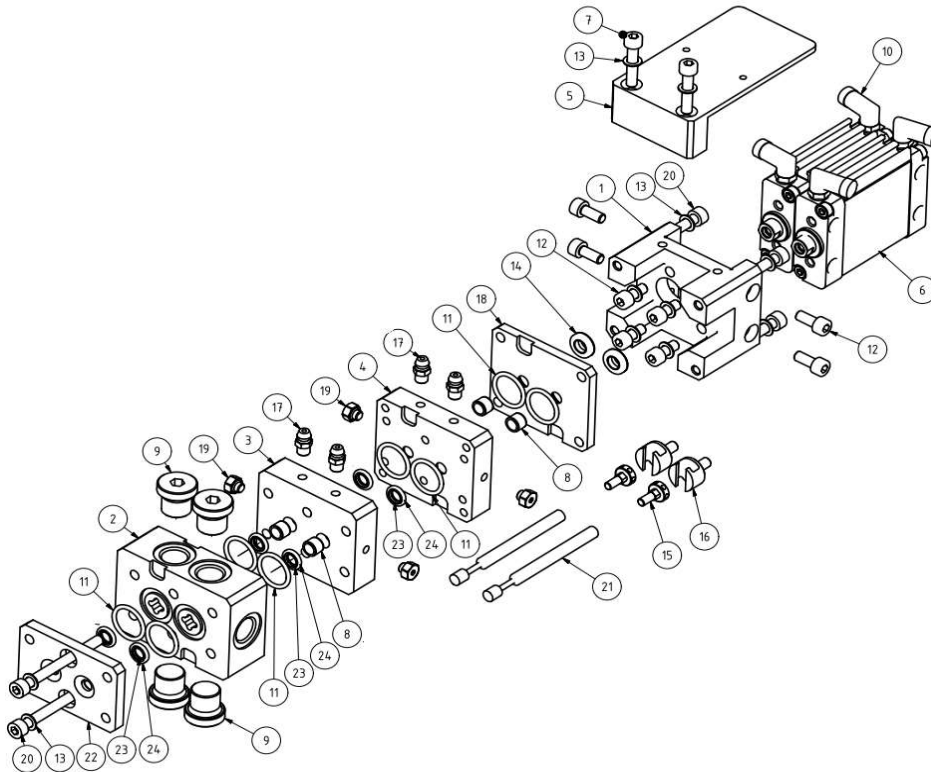
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4.0.0 Description and Function



When assembly, **ALWAYS** ensure that the seals (23) with large diameters are installed in the direction of the connection plate (2).

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	0001-9700-1001	Cylinder plate
2	1	0001-9800-1006	Connection plate
3	1	0001-9700-1009	Intermediate plate
4	1	0001-9700-1004	End plate
5	1	0001-9400-1004	Cover
6	2	0003-0101-25/10	Pneumatic cylinder
7	2	0002-0912-05x025	Hexagon socket head cap screw M5x25
8	4	0009-0003-0043	Bushing
9	4	0001-0001-VSTi14x1,5	Screw plug M14x1.5
10	4	0003-0003-4M5	Swivel elbow fitting
11	8	0005-0001-0129	O-ring
12	8	0002-0912-05x012	Hexagon socket head cap screw M5x12
13	12	0002-0530-05	Schnorr washer 5mm
14	2	0005-0004-0018	Wiper
15	2	0001-9700-1007	Connecting bolt
16	2	0001-9700-1008	Connecting bolt
17	4	0001-0501-0004	Lubricating nipple
18	1	0001-9700-1006	End plate
19	4	0003-0002-0005	Vent valve
20	6	0002-0912-05x055	Hexagon socket head cap screw M5x55
21	2	0001-9800-1001	Piston rod
22	1	0001-9450-0002	Intermediate plate
23	6	0005-0002-0023	Seal
24	6	0005-0001-0041	O-ring

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4.1.0 General description

The 2C material valve with 2 cylinders has been developed to process and meter two-component adhesives and sealants (liquid and pasty) and offers you enormous advantages, for example:

- long tool life
- easy maintenance
- high resistance to aggressive materials and corrosion
- lubrication of the piston rods
- piston rods in 2 sections
- minimum material lost
- material flow of the A and B component can be switched separately

4.1.1 Use

The 2C material valve with 2 cylinders can be optionally mounted on different platforms:

- on a stand
- on a gantry
- a robot

A special handle can be supplied for applications in which the valve is to be held by hand.



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

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4.2.0 How the metering valve works

The 2C material valve with 2 cylinders has an ON / OFF function. The media to be metered are fed via the pump system.

The ON / OFF function of the valve is controlled by the movement of the piston inside the pneumatic cylinders (6).

The piston is retracted in the OFF position and the two piston valves (21) push themselves into the front seals (23), which are located in the inside of the intermediate plate (2).

In the ON position, the piston and the piston valves are pushed forwards and the liquids A and B flow separately through the material combination.

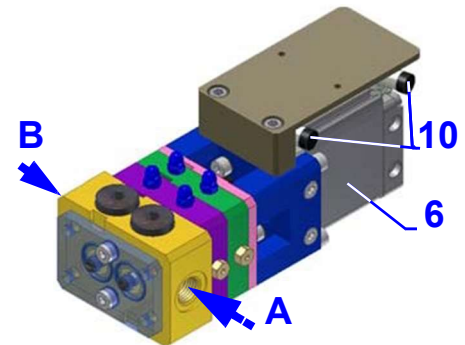
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4.3.0 Installation

4.3.1 Connecting the feed hoses

The material hoses A and B are fixed on the side of the valve body.



NOTE!



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

4.3.2 Stationary installation

In case of stationary installation, the air hoses are each attached to the side of the pneumatic cylinders (6).

- rear pneumatic hoses for opening
- front pneumatic hoses for closing

NOTE!



A pressure of at least 6.0 bar must be applied to the air hoses.

4.4.0 Start

Before starting, check:

- Air hoses connected?
- Material hoses connected?
- Compressed air available?

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4.4.1 Manual work

1. Discharge material separately and clean the material outlet if necessary
2. Purge air from the material hoses A + B and the material valve.
3. Set mixer to combine materials.

4.4.2 Stationary installation

1. Mount the material valve on a pivoted bracket.
2. To flush through, hold the valve with the mixer facing upwards and meter fluids A and B.
3. Discharge the material.
 - If the mixture pattern is OK, you can start to apply the mixture.

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2C Material Valve with 2 Cylinders

4.5.0 Maintenance

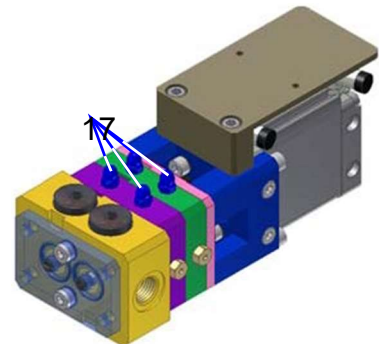
ATTENTION!



ALWAYS carry out the maintenance work listed in the following.

4.5.1 Routine maintenance

1. Depressurise material hoses A and B.
2. Remove the material combination and clean with a suitable solvent.
 - If necessary, soak the distributor in solvent over night
3. After the end of the shift, grease the rear seals with a grease gun via the lubricating nipples (17), until grease emerges from the screw plugs.



NOTE!



To lubricate the 2C valve, please only use the special cartridge No. 0001-9998-0031.
Recommended grease gun No. 0001-9998-0031GUN.

4.6.0 Dismantling and cleaning

1. To clean the piston rods, depressurise the material hoses A and B first.
2. Remove the distributor.
3. Clean the piston rods (21) with a suitable brush or with cloths soaked in solvent.

CAUTION!



EYE INJURIES!



- **ALWAYS** wear safety glasses/goggles

4. If necessary (e.g. leaks), the material valve must be completely dismantled and the set of seals (23) replaced.

NOTE!



- When assembling, **ALWAYS** ensure that the seals (23) with the large diameters are installed in the direction of the connection plate(2), otherwise leaks will occur!

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5.0.0 Disposal

ATTENTION!



- All guidelines and directives regarding metals, plastics, electrical and electronic components, grease, oil, etc. that are applicable at the relevant time must be taken into consideration for the disposal.
- Assign skilled personnel to carry out any dismantling work that is required.