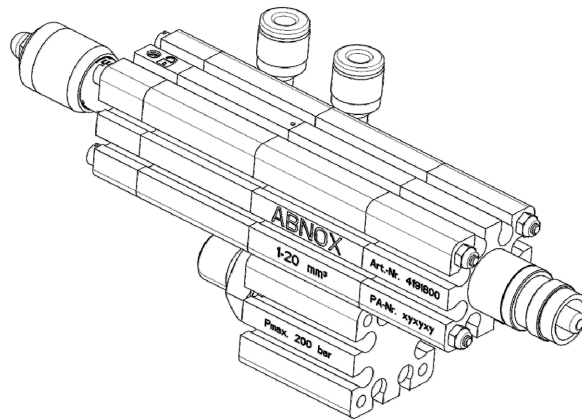


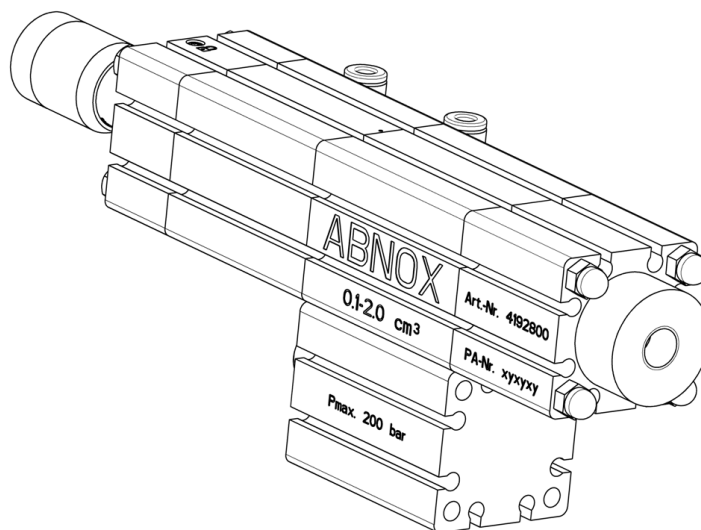
Assembly instructions

Appropriate to Machinery Directive 2006/42/EC, Annex VI

Metering valve AXDV-C1	1 – 20 mm³	Art.-Nr. 4191800
Metering valve AXDV-C2	10 – 200 mm³	Art.-Nr. 4192300



Metering valve AXDV-C3	0.1 – 2.0 cm³	Art.-Nr. 4192800
Metering valve AXDV-C4	1.0 – 6.0 cm³	Art.-Nr. 4192900



Declaration of Incorporation

according to the EU Machinery Directive 2006/42/EG, Annex II, 1.B for partly completed machinery

Manufacturer:

ABNOX AG,
Langackerstrasse
25 6330 Cham

Person residing within the Community authorised to compile the relevant technical documentation:

Igor Lovrinovic
Abnox AG
Langackerstrasse 25
6330 Cham

Description and identification of the partly completed machinery:

Make: Dosierventil AXDV-C1 bis C4
Type: Art.-Nr. 4191800, 4192300, 4192800, 4192900
Project number: PRJ-2010-11-00001
Project name: PR000194 neue Dosierventile

It is also declared that the relevant technical documentation has been compiled in accordance with part B of Annex VII.

It is expressly declared that the partly completed machinery the machinery fulfils all relevant provisions of the following EU Directives:

2006/42/EC: Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17. Mai 2006 über Maschinen und zur Änderung der Richtlinie 95/16/EG (Neufassung) (1)

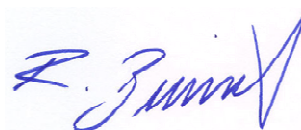
The manufacturer or his authorised representative undertakes to transmit, in response to a reasoned request by the national authorities, relevant information on the partly completed machinery. This transmission takes place:

This does not affect the intellectual property rights!

Important note! The partly completed machinery may be put into service only if it was determined, where appropriate, that the machinery into which the partly completed machinery is to be installed meets the provisions of this Directive.

Cham, 2010.11.08

Place, date



Signature
Roberto Bernich
Leiter Qualitätssicherung

Using of assembly instructions

This document contains information for successful and safe transport, installation and commissioning. If anything is unclear, we recommend, ask ABNOX AG indicating the data type of the product.

Liability

Compliance with the information in this document is a prerequisite for the fulfillment of any liability.

Safety Instructions



IMPORTANT

Note to the guidance in this document, the relevant national, local and plant-specific regulations. Before the operation, the equipment must be damage-free (transit or installation damage).

Basic requirements for the safe handling, trouble-free operation and fulfillment of specified product properties and performance characteristics are:



-
- Rules and regulations regarding the prevention of accidents that apply to the working site must be observed.
 - Must not be used for other purposes.
 - At its equipment may not be changes made. Should this happen, then the customer bears the sole responsibility. If desired modifications please talk to ABNOX AG.
 - Make sure that the equipment is always in safe operating condition. Qualified staff shall perform functional tests and checks for damage at regular intervals. Authorized staff only shall do disassembly, and according to operation instructions only. To ensure appropriate expertise of the customer's staff, ABNOX AG offers training courses upon request.
 - The customer is responsible for ensuring that all necessary safety measures are adhered to.
 - Never operate the equipment if its orifice is pointing towards a person.
 - Before begin of maintenance work, always disconnect equipment from air pressure supply and grease feed pipe.
 - Check all cables, pipes, hoses and screw connectors for leaks and visible damage at regular intervals. Immediately remove all damage!
 - Exposure of the sensors to magnetic fields may cause malfunction of the sensors.
 - Ensure and verify by regular checks, that working place, equipment and environment are kept in a clean and clearly arranged state.
 - Reliable and trained staff only should be authorized to work with the equipment, and responsibilities clearly assigned to individuals.
 - Maintenance of electrical components of the equipment must be performed by a professional electrician, or under supervision of a professional electrician, and according to electro-technical regulations.
 - Maintenance of hydraulic equipment should be assigned to staff with hydraulics know-how and experience only!
 - Before use of the system / equipment, all safety guards properly installed and operational.
 - Protective equipment may be removed only after stability and protection against restarting the system / device.
 - The required personal protective equipment must be provided by the operator.
 - All existing safety equipment should be regularly reviewed.
-

Intended use

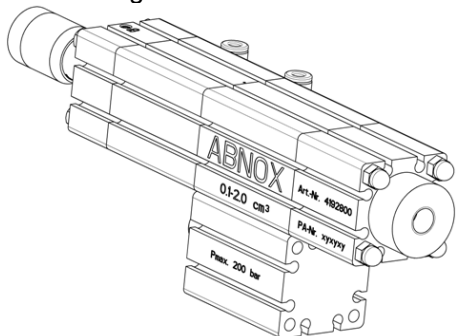
The metering valves are designed for volumetric dosing of not explosives lubricants and oils. You may only use the metering valve according to technical documentation and information.

Any usage other than or beyond that specified here is regarded as not according to the intended purpose. The manufacturer company assumes no responsibility for any damage resulting from such improper usage.

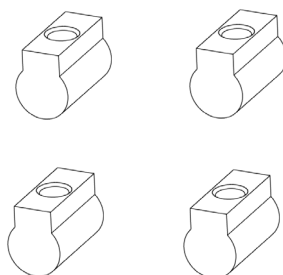
Intended for use also includes compliance and adherence to all instructions in this document and compliance with the inspection and maintenance.

Included in delivery

1x metering valve



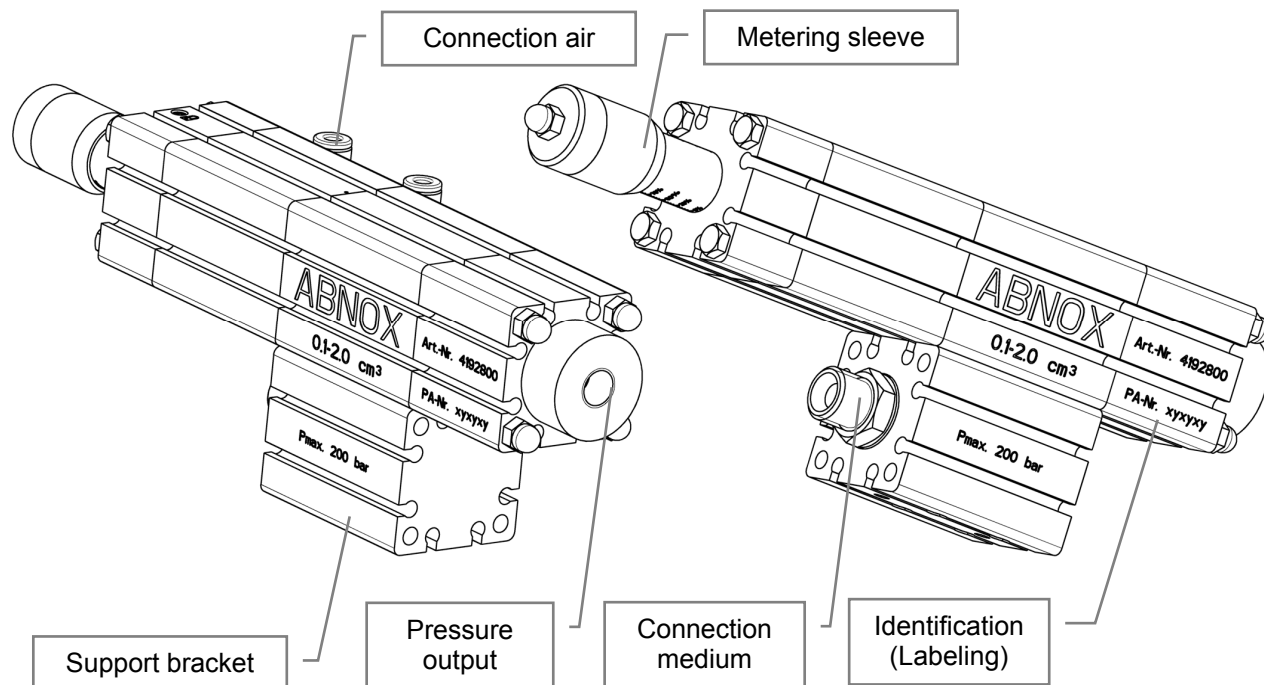
4x Nuts



1x Assembly instructions



Construction and Identification



NOTE

Please indicate the product information shown on the engraving and on the type plate when requesting spare parts or technical support.

Functionality

The pneumatic part of the metering valve is controlled by an external pneumatic 5/2-way-valve. Moving the piston causes a defined volume of grease to be applied. The output pressure depends on the lubricant feed pressure (media).

Technical data

Model	AXDV - C1	AXDV - C2	AXDV - C3	AXDV - C4
Dispensing range (mm ³)	1 – 20	10 – 200	100 – 2`000	1`000 – 6`000
Dispensing range (cm ³)	0.001 – 0.020	0.010 – 0.200	0.1 – 2.0	1.0 – 6.0
Weight (kg)	0.180	0.182	0.773	0.802
Connection medium	G 1/8“		G 1/4“	
Connection air pressure	for hose AD 4 mm			
Pressure output	for ABNOX dispensing needle (M6)		G 1/8“	
Mounting thread	4x nuts M2.5		4x nuts M2.5 or 2x M4x6 thread	
Min. / Max. medium pressure (bar)	20 / 200			
Min. / Max. operating air pressure (bar)	3 / 7			
Optimum operating air pressure (bar)	6			
Specification medium	Lubricants until NLGI 3 / max. 1`000`000 m Pa.s			

Packing, Transport and Storage

Preparation and packing of equipment is provided by ABNOX AG and is designed for transportation to the “first destination”.

The packaging must not be exposed to additional strain. The packaging and its contents should be protected from humidity. Ambient temperature during transport and storage must be maintained within –20 °C to +40°C.

Should damage due to transportation be discovered by the incoming goods inspection, the following procedure should be observed:

- Inform Transport Company (Carrier Company, railways etc.)
- Write damage report
- Inform supplier company

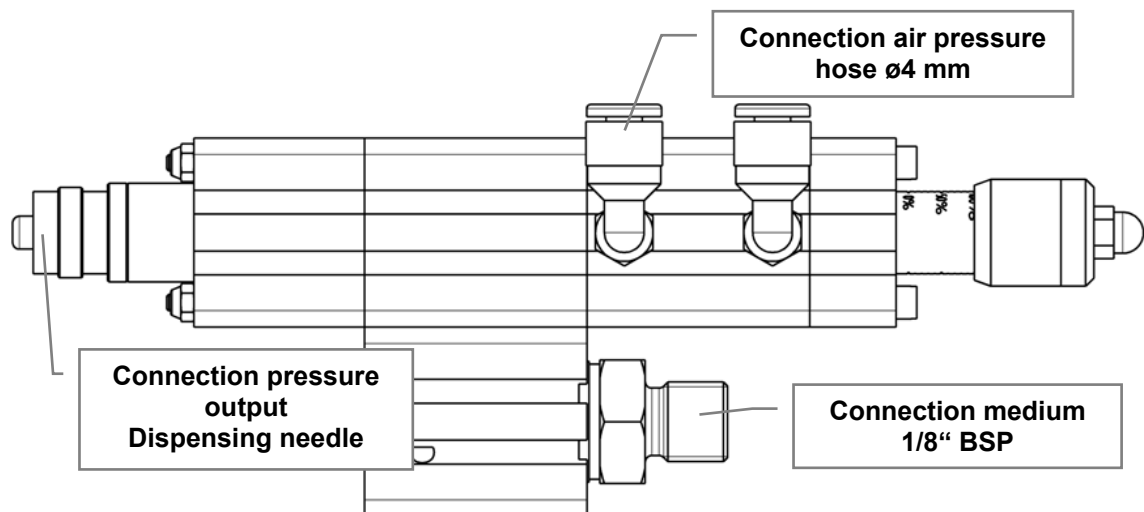
Storage in an aggressive or moist environment or outdoors may lead to corrosion or other damage. ABNOX AG will not assume liability for such damage. Temperature must be kept within –20 °C to +40°C during transport and intermediate storage.

Installation conditions / Assembly

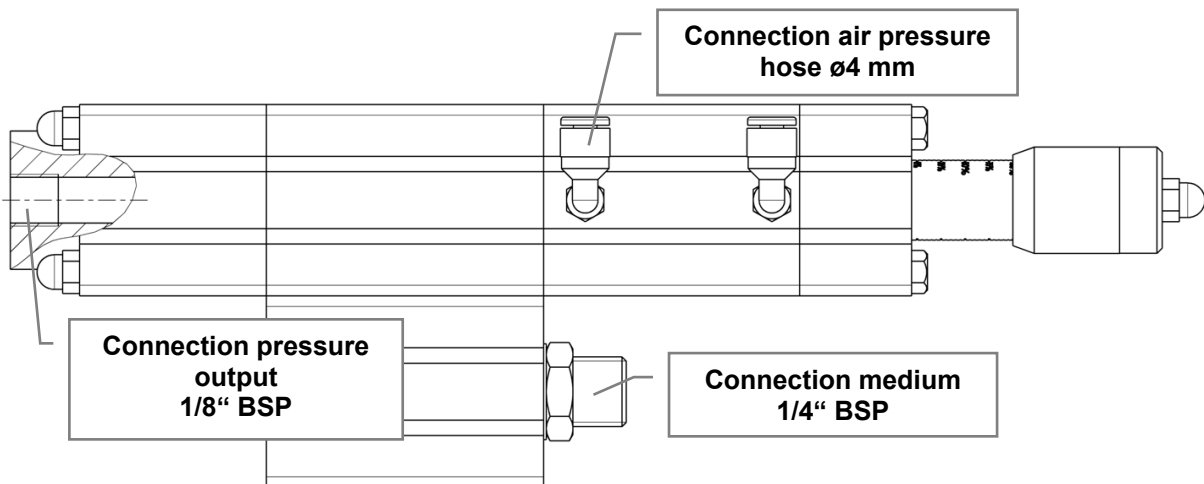
The equipment shall be installed at the intended operating site, under consideration of the following conditions:

- All legal requirements for the mounting site should be identified and verified on site whether they are fulfilled.
- Prior to installation of the equipment, or insertion into the plant respectively, the condition of the floor and the size of the surrounding space should be checked, to ensure safety of operation for both personnel and equipment. The installation or insertion into the plant respectively, shall be such, that continuous operation at a high safety level is ensured.
- The installation of the equipment, as well as commissioning of the equipment, or storage, shall be conducted by specialists trained and made familiar with the equipment only.
- The equipment is not designed for use in areas with exposure to weather influence. Operation or storage of the equipment in an aggressive or moist environment or outdoors may lead to corrosion or other damage. ABNOX AG will not assume liability for such damage.
- Grooves block for the C-slots for mounting are included
- Mounting with supplied slide blocks (all metering valves), C2 and C3 an additional 2x M4x8 on bottom of the mounting block.

Interface C1 and C2



Interface C3 and C4

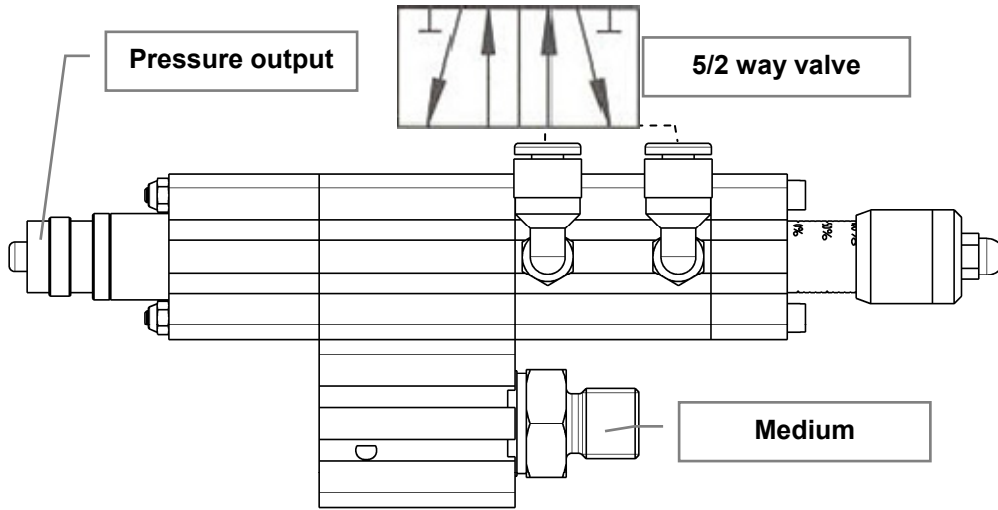


Connection Example

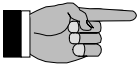


NOTE

ABNOX AG recommends the use of a maintenance unit to ensure clean air supply.



Commissioning



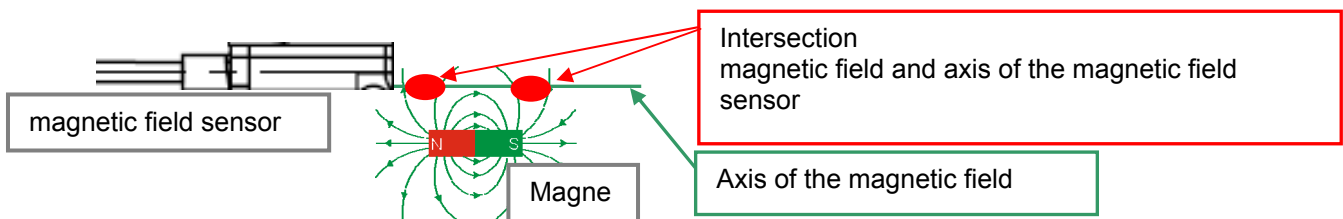
NOTE

In order to ensure optimal operation of valves, make sure that the air supply pressure is set to approx. 6 bar.

The lubricant feed should not exceed the max. pressure at the input (See data sheet). To ensure this, check the pressure conversion ratio of the lubricant feed pump. The feed pressure may be reduced by means of an air pressure control valve (The use of an air pressure control valve may be advantageous, although it is not imperative).

All metering valves are tested by the manufacturer prior to shipping. Due to testing, residues of test liquid may be found inside the valve.

- 1) Make sure that the lubricant feed hose is filled with lubricant and all air removed. Then connect feed hose and air connectors according to drawing.
- 2) For first operation, set valve to maximum dosage (i.e. turn adjustment screw to outmost position).
- 3) If the adjustment screw cannot be turned, change position of change-over-valve. The adjustment screw should now be unlocked.
- 4) Execute a first shot of lubricant. Then set the adjustment screw to the desired grease quantity.
- 5) Keep the distance from the metering valve to the greasing point short. This allows for improved metering precision and repeatability.
- 6) The minimum cycle time depends upon the viscosity of the lubricant, as well as the lubricant feed pressure.
- 7) The metering valves can be fastened with screws and sliding blocks for the C-slots.
- 8) Dosage can be adjusted continuously using the metering sleeve.
- 9) During assembly of the magnetic field sensors, make sure that it has 2 intersections per magnetic field.



Fault – Cause – Action



NOTE

Troubleshooting should be performed by a trained specialist only.

Fault	Possible cause	Action
Valve is actuated, but no lubricant is ejected	No lubricant may be transported by feed pump	Check feed pump. See operating manual of feed pump
	Leak	Check venting screw of feed pump (See operating manual of feed pump) Check metering valve
Signal of sensor is continuously set to „on“	Faulty Initiator	Replace Initiator
	Metering volume too small	Check metering valve, check setting of metering adjustment screw / Check sensor position
	Pressure grease too high	Pump pressure reduce to maximum Use possibly a material pressure regulator
No output signal from Sensor	Broken cable	Replace cable
	Faulty sensor	Replace sensor
	Electrical connection loose, disconnected	Check electrical connections
	Metering plunger on start position.	Checking pump pressure. Checking borings of the grease supply for impurity.
Air pockets in grease system	Air pockets in grease container Air pockets in tubing	Disconnect tubing to metering valve. Drain a quantum of grease. Restart with dosage adjustment screw set to maximum.



NOTE

For more information about the product visit www.abnox.com

Customer Service / Support

ABNOX AG

Langackerstrasse 25
CH-6330 Cham

Phone +41 (0) 41 780 44 55
Fax +41 (0) 41 780 44 50

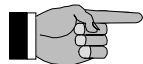
E-Mail info@abnox.com
Internet www.abnox.com

Maintenance



WARNING

As a rule, all work must be executed with the equipment shut down only. The main switch must be switched off and the mains plug disconnected from electrical supply. Pressure inside the pneumatic and the hydraulic systems must be removed.



NOTE

This chapter does not explain how to repair damage of the equipment. Damage repair shall be executed exclusively by skilled and trained experts, or by staff of the manufacturer's customer service.

Maintenance Plan

The maintenance intervals stated below are valid for single shift operation of the equipment. In case of multiple-shift or very intensive operation, maintenance intervals are shortened accordingly. Also take into account other influences on maintenance need, such as dirty environment.

WHEN	WHAT	HOW	WHO
Weekly	Check metering valve for leak proofness	Visual inspection	User company expert
Weekly	Check connections for leak proofness	Visual inspection	User company expert
Monthly	Check electrical cabling for damage	Visual inspection	User company expert



WARNING

After completion of the work is necessarily to check all functions and safety devices.

Spare Parts

Exact type designation must be specified when ordering spare parts.



NOTE

For spare parts, dimension drawings and seal sets see www.abnox.com

Material Disposal



WARNING

Materials and liquids shall be individually handled and disposed of in a professional manner and in compliance with the applying national legal regulations.

Lubricant material must be treated as hazardous waste.
