Manufacturing GmbH

ORIGINAL
OPERATING MANUAL

- Please keep for future reference -

Minibooster

1 Index

2 General

2.1 About this operating manual

2.1.1 Revision status of the operating manual

Date of revision: 26.01.2017
Revision index: 00

2.1.2 Requirements for the operation of the Minibooster

We assume that

- The operating personnel has been briefed on the safe operation of the Minibooster and has read and understood the entire operating manual,
- The maintenance personnel service and repair the Minibooster in a way, that there is no risk from the Minibooster for humans, environment and material.

2.1.3 Availability of the operating manual

Operating manual is always to be kept available for all persons working with or on the Minibooster.

2.2 Notes and symbols used in this operating manual

2.2.1 Instruction and results

Instructions are marked in the order of their execution by triangles.
Results of the actions carried out are marked by a tick.

Example:

▶ Let the Minibooster operate until the lubricant level sinks.

✓ The pump will start supplying lubricant again.

2.2.2 Description of safety notes

Safety notes are always marked with a signal word and partially also with a hazard specific symbol (see chapter 2.2.3, page 5).

The following signal words or hazard levels are used:

⚠ DANGER!

Immediate danger!
Failure to observe the safety notes might result in serious injuries or death!

⚠ WARNING!

Possibly dangerous situation!
Failure to observe the safety notes might result in serious injuries or death!

⚠ CAUTION!

Possibly dangerous situation!
Failure to observe the safety notes might result in moderate to minor injuries!

ATTENTION!
Possibly dangerous situation! Failure to observe the safety notes might result in material damage or environmental pollution!

2.2.3 Symbols

The following symbols are used in this operating manual and on the Minibooster:

Warning signals

	General Warning!
	Warning of dangerous, electrical voltages!
	Warning of substances hazardous to health or irritating substances!
	Warning of hot surfaces!
	Environmentally hazardous substance!

Tab. 1 Warning signals

Signs giving orders

	Follow operating manual!
	Wear safety goggles!
	Wear protective gloves!
	Disconnect before work!

Tab. 2 Signs giving orders

2.2.4 Notes

	Notes Describe general information and recommendations.

2.3 Name and address of manufacturer

Name	Accu-Lube Manufacturing GmbH
Address	Glaitstr. 29, D-75433 Maulbronn-Schmie
Phone	+49-7043-5612
E-mail	info@accu-lube.com
Internet	www.accu-lube.com

Tab. 3 Name and address of manufacturer

2.4 Warranty and liability

Basically the manufacturer's „general terms of sale and delivery" will apply.

2.5 Complementary documents

Safety data sheets of ACCU-LUBE-lubricants can be downloaded from www.accu-lube.com.

2.6 Product monitoring

Manufacturers give information on

- accidents
- potential hazards of the Minbooster
- incomprehensibilities in this operating manual

2.7 Safety information

2.7.1 Conversions or modifications carried out by the user

Conversions or modifications on the Minibooster carried out by the user are not allowed and can lead to loss of EG-conformity!

2.7.2 Residual dangers

Residual dangers, that might occur during operation, maintenance or repair, are dealt with in the respective chapters of this operating manual.

2.7.3 Personnel requirements

Only authorized persons may carry out work on the Minibooster!
They must be familiar with the safety installations and regulations, prior to carrying out work.
Authorised personnel is:

Operating stage	Qualifications required
Normal operation	Trained personnel
Cleaning	Trained personnel
Maintenance and repair	Trained personnel of the operator or qualified personnel from the manufacturer
Repairs	Qualified personnel from the manufacturer

Tab. 4 Personnel requirements

3 Technical Description

3.1 Intended use

The Minibooster must exclusively be used to atomise and supply lubricants for inside lubrication in the following processes:

- Cutting operations, like drilling or milling
- Wetting of work pieces
- Application of corrosive protection

Here only specified lubricants may be atomised and supplied.
The supply of compressed air without lubricant e.g. for blowing-out is allowed.

- The Minibooster must be operated only within the specified performance limits (see technical data).
- The Minibooster must be operated only in industrial environment.
- Observing the operation manual and complying with the maintenance and servicing regulations is required for the intended use of the Minibooster.

3.2 Reasonably foreseeable misuse

Any other use or use beyond the intended use is considered as not intended use. The manufacturer does not assume liability for damages resulting from this. The manufacturer does not assume liability for modifications or improper installation, start-up, operation, maintenance or repair.
Only original parts supplied by the manufacturer are considered approved spare parts and accessories. Spare parts and accessories which have not been supplied by the manufacturer are not approved for operation and might affect operational safety. The manufacturer does not assume liability for damages caused by using non-approved spare parts and accessories.
Reasonably foreseeable misuse is in particular:

- Operation in explosive areas
- Operation in fire risk areas
- Operation beyond the specifications given by the manufacturer (e.g. higher pressures)
- Use of other than the specified lubricants
- Conversion or modification of the Minibooster without written consent of the manufacturer!

3.3 Functional description

Lubricant is supplied from the reservoir (1) through the pump (2) into the Booster chamber (3). There aerosol is produced with compressed air. The aerosol is supplied into the reservoir (4) and from there to the cutting edge (5).

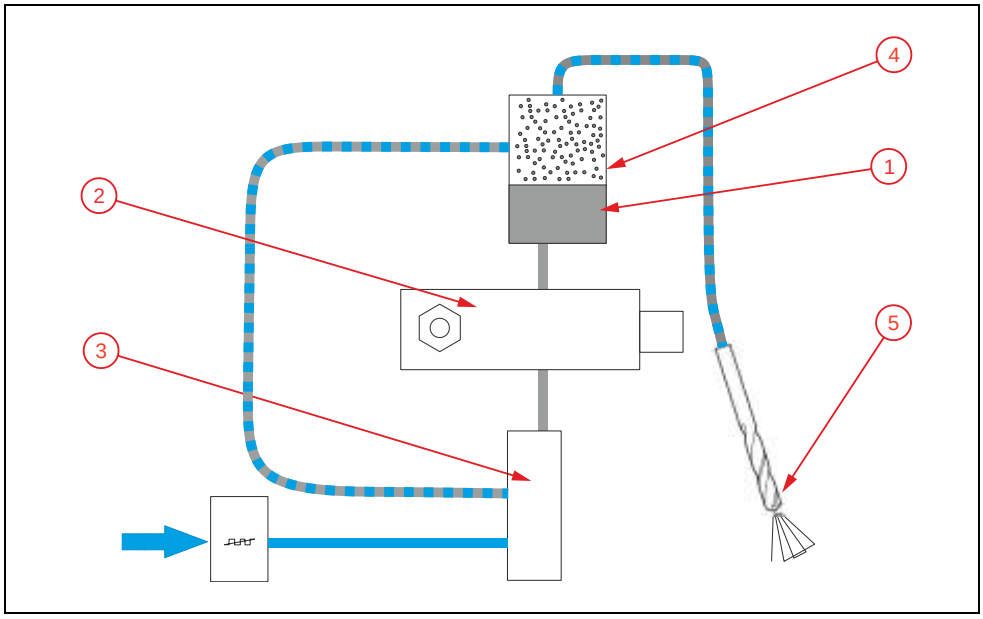


Abb. 1 Functional description

3.4 Different versions

3.4.1 MB 2010 „Mini“ sensor regulated

The Minibooster MB 2010 „Mini“ is equipped with a pressure sensor, which measures the backpressure from the tool.
When 5,3 bar is reached the MiniBooster will switch off.
When the pressure falls, the Minibooster will switch on automatically.

3.4.2 MB 2010 „Power“ sensor regulated

The Minibooster 2010 „Power“ is equipped with a pressure sensor, which measures the backpressure from the tool..
When 5,0 bar is reached one Booster chamber will be switched off.
When 5,5 bar backpressure is reached, the Minibooster will switch off completely.
When the pressure falls the Minibooster will switch on automatically.

3.5 Main Components

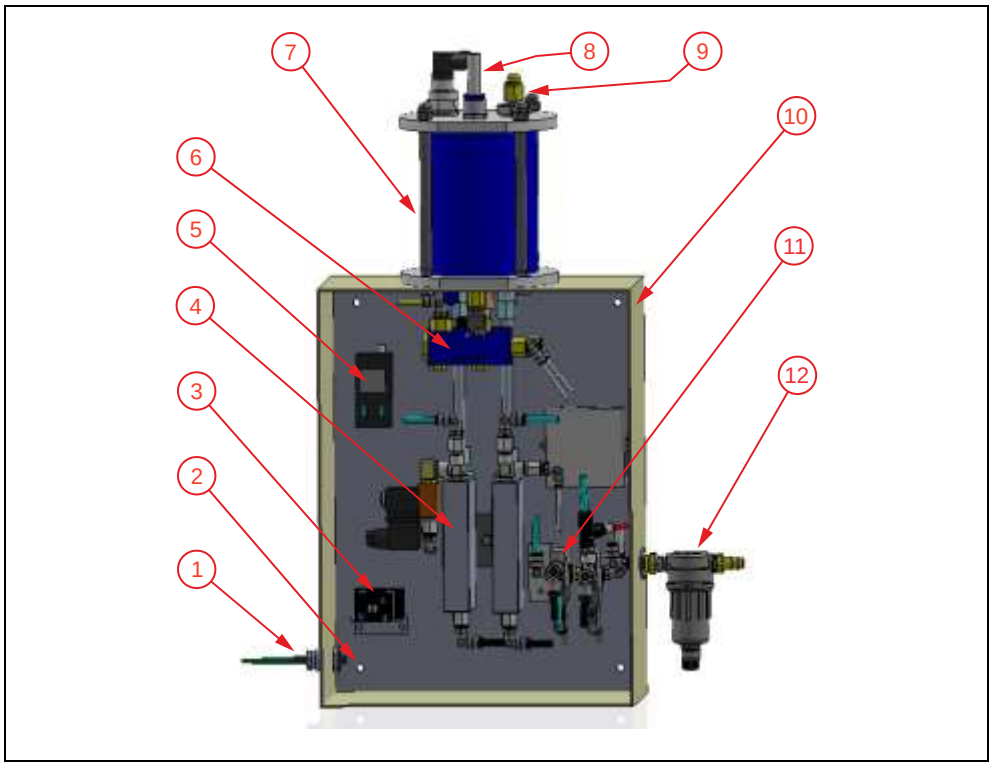


Abb. 2 Main components of the Minibooster

Pos.	Components	Function
1	Connection for activation	Connection to provided control
2	Mounting system	Four bores for the mounting screws
3	Frequency generator Standard: pneumatic Alternatively: electronic	Sends air impulses to the pump, alternative: activation of solenoid valve by stored program control (SPC)
4	Booster chamber	Atomisation of the lubricant
5	Pressure sensor (optional)	Indication of back pressure
6	Pump	Supplies the lubricant into the Booster chamber
7	Reservoir	Reservoir for aerosol and lubricant
8	Hose connection	Connection to the tool
9	Filling screw with safety valve	Pressure monitoring
10	Metal box	Housing of components
11	Throttle check valve	Regulates the back pressure at the tool, if no pressure sensor is installed.
12	Connection for compressed air with air filter	Compressed air supply and elimination of moisture or impurities.

Tab. 5 Main componets and their function

4 Technical Data

4.1 Dimensions and weights[1]

Dimensions (L x W x H)	minimum	300 x 150 x 670 mm
	maximum	400 x 200 x 780 mm
Weight (empty)	According to configuration	13 - 29 kg

4.2 Details on power and media supply

Electric	
Power supply	24 V DC
Electrical power depending on model	3 VA
Pneumatic	
Compressed air connection	5,5 – 8 bar

4.3 Specified lubricants

Lubricants	Ingredients	Packaging units
LB 4000	Natural ingredients	1, 5, 20, 205 ltr.
LB 5000	Fatty alcohol	
LB 5500		
LB 8000	Ester	

For further information please refer to the safety data sheets.

[1] The actual dimensions can vary depending on special configurations.

4.4 Further technical data

Frequency generator	
Pneumatic	5 – 200 strokes/min
Electric	1 – 120 strokes/min

Setting of the cycle by the SPC of the machine.

Reservoir	
Volume	1,0 or 2,0 ltr.
Level indicator	To be selected

4.5 Emission of noise, waste etc.

Noise	
Sound pressure	< 70 dB(A)

4.6 Ambient conditions for operation and storage

Allowable ambient conditions	
Ambient temperature	0…+40°C
Installation site	Dry, frost-free
Atmosphere	Industrial environment, non-explosive

4.7 Protection

4.7.1 Personal protective equipment

Operation stage	**Personal protective equipment**
Normal operation	• Protective gloves
Cleaning	• Protective gloves
Maintenance and repair	• Protective gloves, protective shoes

Tab. 6 Personal protective equipment

5 Preparation for use

5.1 Delivery

5.1.1 Delivery status

The Minibooster is packed in bubble-wrap, and delivered in a cardboard box padded with styrofoam.

5.1.2 Standard scope of delivery

Pos.	Components
1	Minibooster with reservoir
2	Air filter
3	Lubricant for start-up
4	Two keys for metal box

Tab. 7 Standard scope of delivery

Check completeness of delivery.

5.2 Transport and Storage

⚠ CAUTION

Risk of injury during transport!
Minibooster weighs up to 30 kg!

► Lift the Minibooster with two persons or use lifting gear.

5.2.1 Transport

► Minibooster is to be transported to the installation site with a suitable lifting gear. (Weight: see chapter 4, page 10)

5.2.2 Storage

Store in dry, frost protected places with corrosion-free atmosphere.

Allowable ambient conditions	
Ambient tempretaure	0…+30°C
Relative air moisture	max. 50%
Installation site	In-doors, even, dry, vibration-free
Atmosphere	Non-corrosive, non-explosive, non-flammable

Tab. 8 Allowable ambient conditions for storage

► Used or contaminated Minibooster is to be cleaned and drained completely before storage.
► For long-term storage (> 2 years) Minibooster is to be protected against corrosion.

5.3 Unpacking the Accu-Lube MiniBooster

► Open cardboard box and remove the packing material.
► Take out the MiniBooster (avoid damages).

5.4 Check the delivery

- ▶ Check completeness of delivery (see chapter 5.1.2, page 12).
- ▶ If any components are missing inform the manufacturer immediately.
- ▶ Check delivery for transport damage.
- ▶ If there is any transport damage inform forwarding agent immediately.

5.5 Disposal of packaging material

- ▶ Separate packaging material and dispose of environmentally sound.

6 Installation and mounting

⚠ WARNING!

Risk of injury with incorrect mounting!

- ▶ First mount the Minibooster safely!
- ▶ After safe mounting begin with start-up.

6.1 Assembling the Minibooster

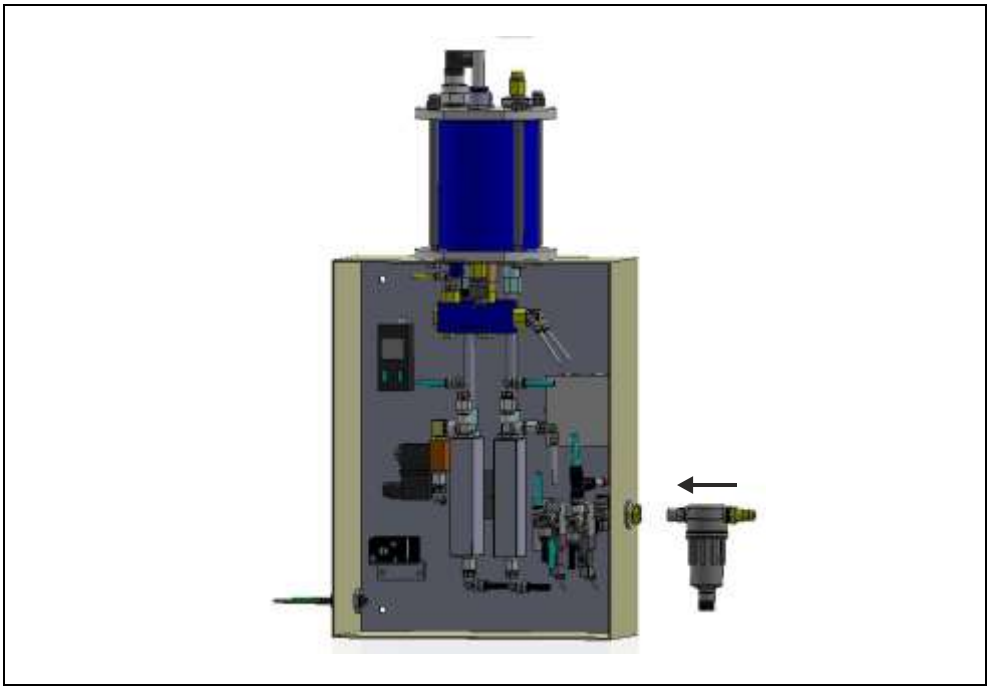


Abb. 3 Assembling the Minibooster

- ▶ Screw-in the air filter by hand.

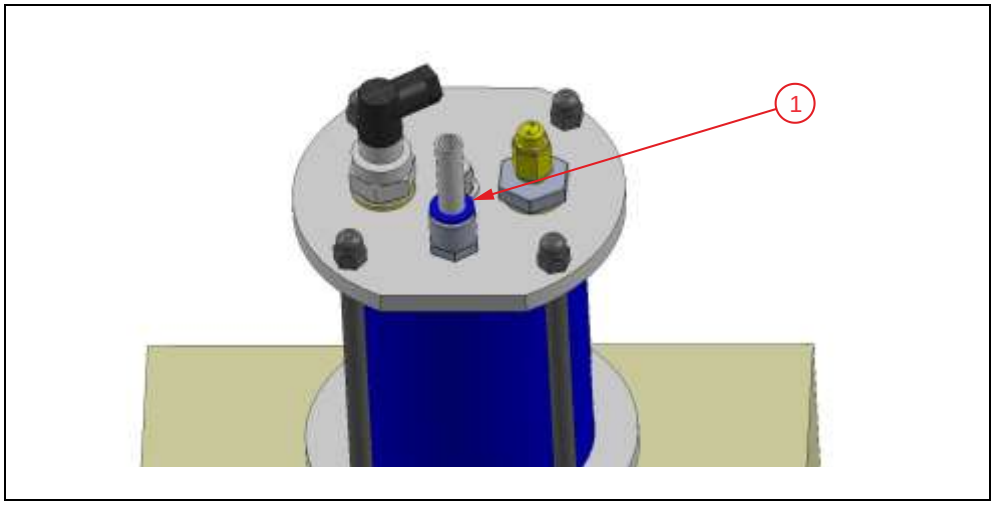


Abb. 4 Connecting the aerosol hose

▶ Connect the aerosol hose (1) from the reservoir to the rotating union.

6.2 Mounting the Minibooster

☞	Select the installation site so that: • The Minibooster is mounted level. • There is easy access to the reservoir for refilling.

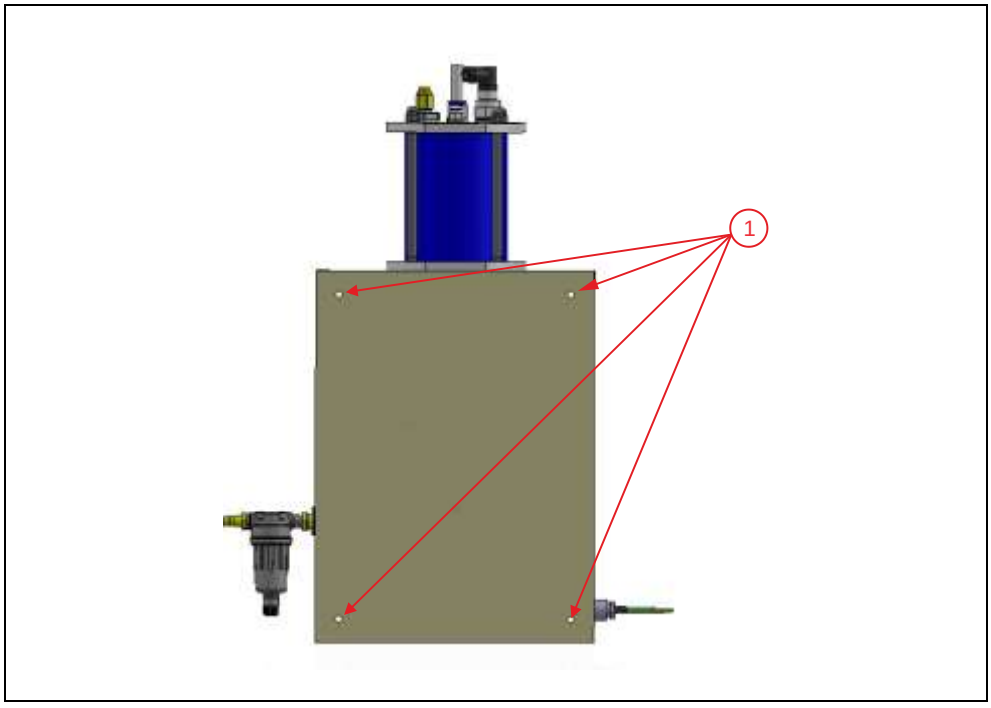


Abb. 5 Mounting the Minibooster with screws

▶ Mount the Minibooster horizontally with 4 screws through the bores (1) on the rear side.
▶ Make sure the Minibooster is fixed properly.

6.3 Electric connection

- ▶ Adapt the included connecting cable to on-site conditions.
- ▶ Lay connecting cable in suitable cable protection duct.
- ▶ Connect to 24 V DC (br = 24V+, bl = 0V, gr-ye = PE).

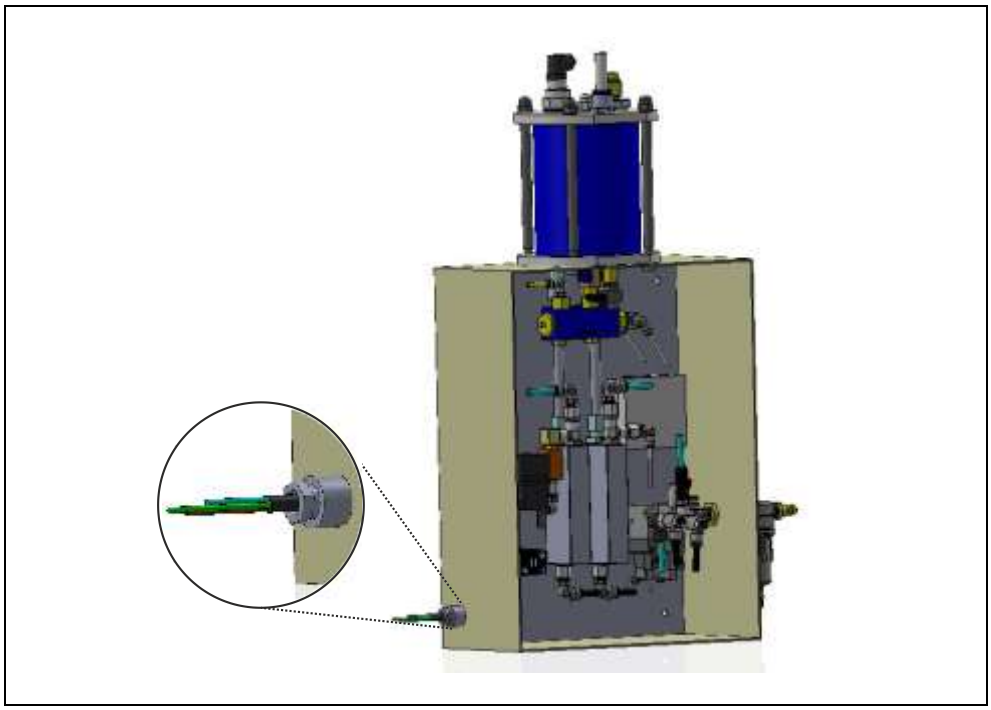


Abb. 6 Electric connection 24 V DC

6.4 Pneumatic connection

ATTENTION!

Material damage caused by compressed air containing oil!
Through compressed air containing oil components can be polluted or damaged.
▶ When using compressed air containing oil install an oil filter!

As standard with all Miniboosters the connection for compressed air is on the right hand side of the metal housing.

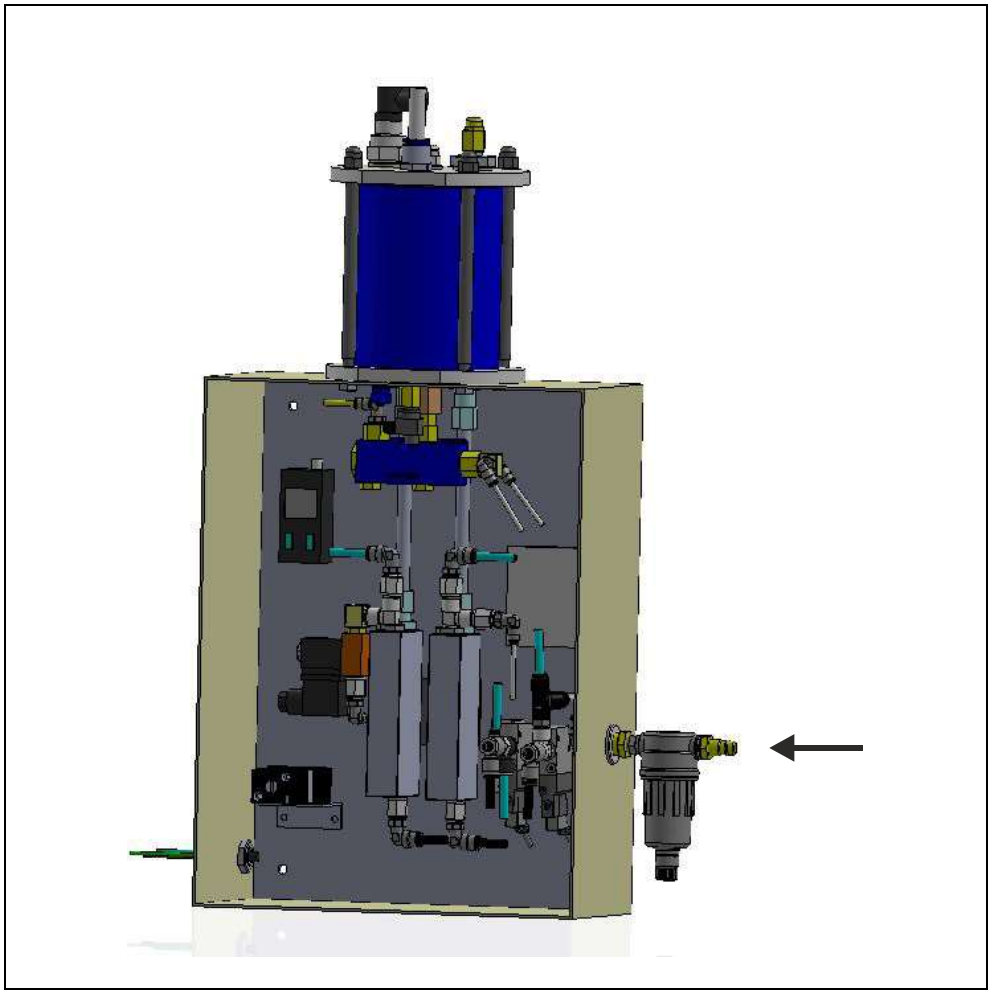


Abb. 7 Pneumatic connection

▶ Connect compressed air (see chapter 4.2, page 10).
▶ Drain air filter.

6.5 Activation of the 24 VDC solenoid valve

The solenoid valve of the Minibooster is activated by the machine.

7 Start-up and Settings

7.1 Filling in the lubricant

⚠ WARNING!

Risk of injury! Reservoir is under pressure!

- ▶ First depressurise the reservoir.
- ▶ Then open reservoir.

⚠ WARNING!

Danger of fire, explosion or injury caused by unsuitable lubricants or coolants!

- ▶ Only use approved, non-oxidising lubricants, which do not create an explosive atmosphere.
- ▶ Refilling only to be carried out by trained personnel.
- ▶ Wear suitable personal protective equipment.
- ▶ Read safety data sheets.

ATTENTION!

Material damage caused by unsuitable lubricants or coolants!

Only operate with ACCU-LUBE lubricants. Not specified lubricants might destroy the seals.

- ▶ Wait until the pressure has been released through the tool.
- ▶ Open the filling screw (1) on the reservoir carefully.
- ▶ Fill in lubricant.
- ▶ Close the filling screw (1).

✓ The Minibooster is ready for operation.

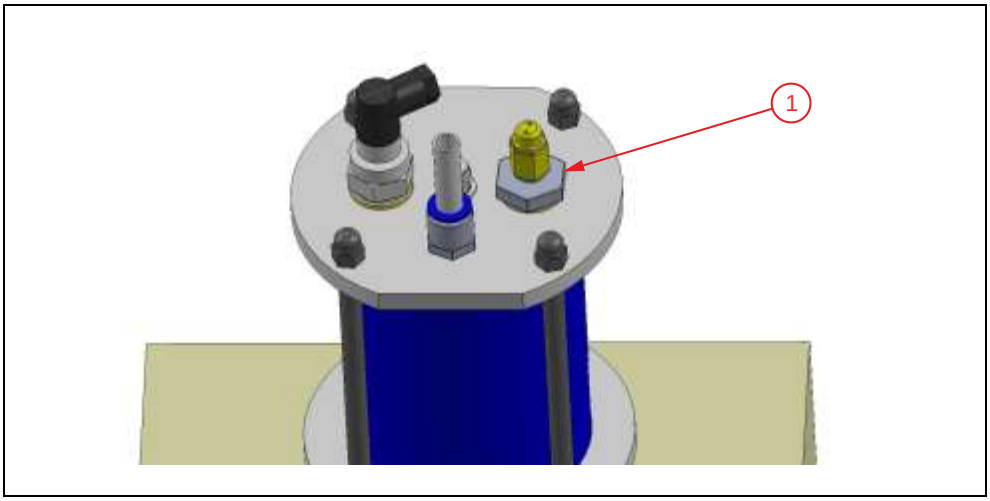


Abb. 8 Filling in the lubricant

7.2 Adjusting the pump

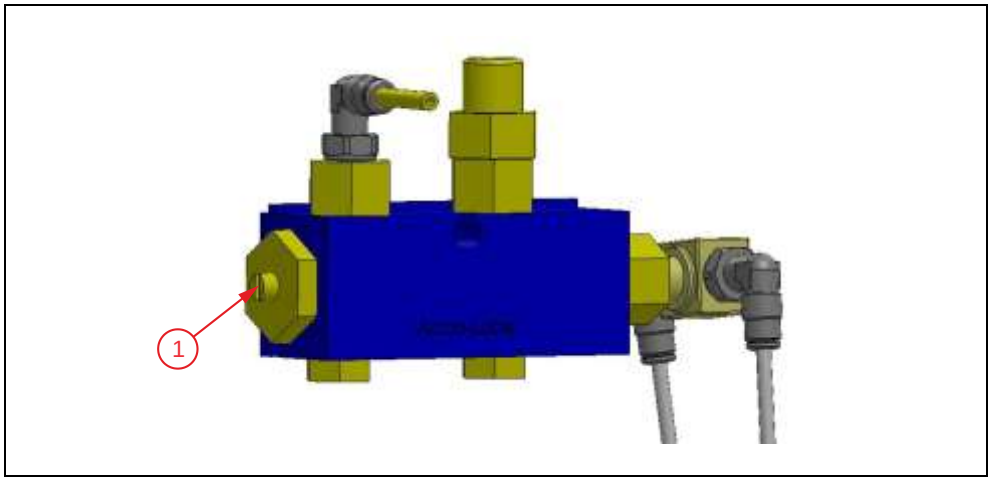


Abb. 9 Adjusting the pump

Adjusting the volume of lubricant

- ▶ Reduce lubricant volume: Turn adjusting screw (1) clockwise.
- ▶ Increase lubricant volume: Turn adjusting screw (1) anti clockwise
- ▶ Standard setting: Turn adjusting screw (1) until it is flush with the brass hex.

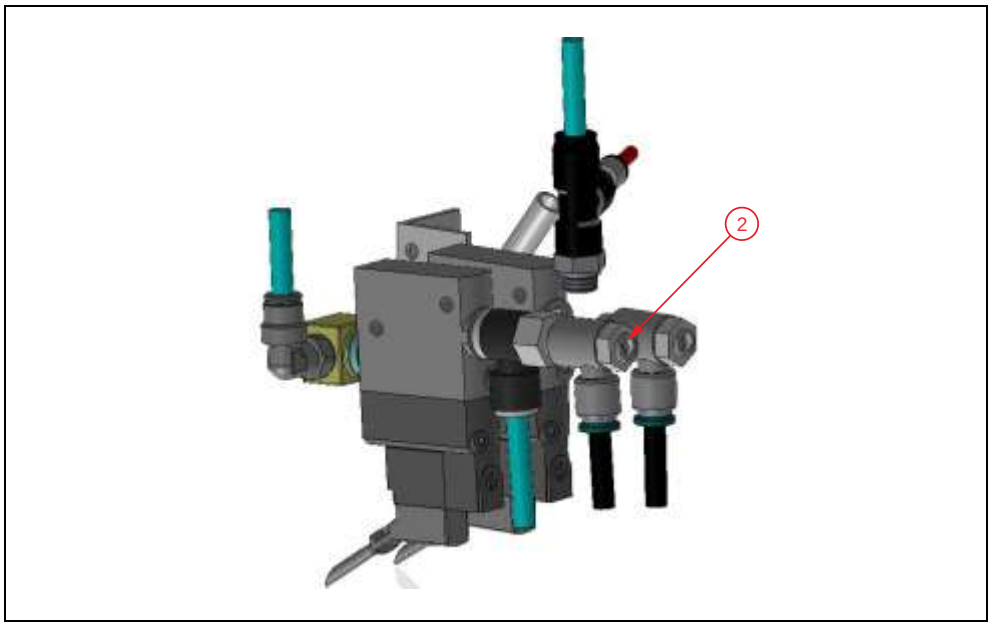


Abb. 10 Adjusting the back pressure

Adjusting the back pressure

With the help of the throttle check valve the back pressure from the tool is regulated. The ideal value is 4,5 – 5,5 bar (Back pressure is indicated on the upper air pressure gauge on the door).

- ▶ Reduce back pressure: Turn throttle check valve (2) clockwise.
- ▶ Increase back pressure: Turn throttle check valve (2) anti-clockwise.

7.3 Adjusting the frequency generator

The frequency generator sends an air impulse to the pump, so that the set lubricant volume is supplied for a certain time.
This air impulse moves the piston in the pump forward. After the venting a spring will move the piston back into its initial position.

Pneumatic frequency generator

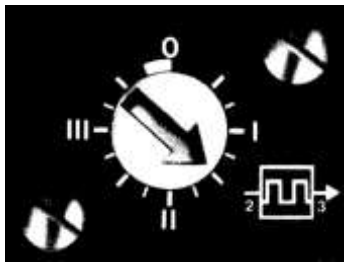


Abb. 11 Adjusting the pneumatic frequency generator

- ▶ Reduce cycle: Turn adjusting screw clockwise.
- ▶ Increase cycle: Turn adjusting screw counter clockwise.
- ▶ Standard setting: Turn adjusting screw to 1,0.
- ▶ Switch off frequency generator: Turn adjusting screw to 0.

7.4 Adjusting the cycle by SPC

If the cycle is to be adjusted by stored program control (SPC), the pneumatic frequency generator must be replaced by a suitable solenoid valve.
Basic setting of frequency: 30 impulses in 60 seconds.

8 Normal operation

In normal operation the Minibooster is operated according to the respective control (see chapter 6.5, page 16).

8.1 Refilling lubricant

⚠ WARNING!

Risk of injury! Reservoir is under pressure!
- ▶ First depressurise the reservoir.
- ▶ Then open reservoir.

⚠ WARNING!

Danger of fire, explosion or injury caused by unsuitable lubricants or coolants!
- ▶ Only use approved, non-oxidising lubricants, which do not create an explosive atmosphere.
- ▶ Refilling only to be carried out by trained personnel.
- ▶ Wear suitable personal protective equipment.
- ▶ Read safety data sheets.

ATTENTION!

Material damage caused by unsuitable lubricants or coolants!
Only operate with ACCU-LUBE lubricants. Not specified lubricants might destroy the seals.

Refilling is possible only during operation brakes.

- ▶ Wait until the pressure has been released through the tool.
- ▶ Open the filling screw on the reservoir carefully.
- ▶ Fill in lubricant.
- ▶ Close the filling screw.

8.2 Typical pressure in the reservoir

Depending on the tool diameters and the cross sections of the cooling channels back pressure is created in the reservoir during operation.

Tool geometry	Back pressure
Small tool diameters or small cross sections of cooling channels	0 … 5,5 bar
Large tool diameters or large cross sections of cooling channels	0 … 5,0 bar

Tab. 9 Maintenance plan

8.3 Decommissioning the Minbooster

8.3.1 Shut down Minibooster in an emergency

Stop air supply with the emergency stop function of the machine, into which the Minibooster is integrated.

8.3.2 Short-term decommissioning of Minibooster

Stop the activation of the solenoid valve through the machine, into which the Minibooster is intergrated.

8.3.3 Long-term decommissioning of Minibooster

☞	Notes: ▶ After long-term decommissioning carry out start-up again. ▶ For storage longer than two years take corrosion protection measures.

- ▶ Decommission Minibooster (see above).
- ▶ Disconnect compressed air supply.
- ▶ Drain reservoir.
- ▶ Clean external parts of Minibooster with soapy water (pumps and hoses need not be cleaned)
- ▶ Store in a dry place.

9 Maintenance

9.1 Safety measures during maintenance

⚠ WARNING!

Risk of injury during maintenance procedures!

- ▶ Before carrying out maintenance procedures close down the higher-level machine.
- ▶ Secure the Minibooster against unauthorized restarting.
- ▶ Observe applicable accident prevention regulations and safety rules.
- ▶ Wear personal protective equipment (protective gloves).

Abb. 12 Secure the Minibooster against unauthorized restarting

9.2 Maintenance plan

Interval	Component	Action
If required	Air filter	Drain
	(Magnetic) Mounting	Check
	Nozzles	Check, replace if necessary
	Hoses, Connecting lines	Check, replace if necessary
	Area below the Minibooster	Check for spilt lubricant, if necessary leak detection and sealing

Tab. 10 Maintenance plan

9.3 Draining the air filter

- ▶ Depressurize Minibooster.
- ▶ Disconnect from compressed air.
- ▶ Open drain screw.
- ▶ Drain water into a container.
- ▶ Close drain screw.
- ▶ Re-connect to compressed air.

10 Malfunctions

In case of queries please contact the manufacturer:

Name	Accu-Lube Manufacturing GmbH
Address	Glaitstr. 29, D-75433 Maulbronn-Schmie
Phone	+49-7043-5612
E-mail	info@accu-lube.com
Internet	www.accu-lube.com

Tab. 11 Contact data

Clients abroad please contact our distributors:
http://www.accu-lube.com/kontakt/vertriebspartner/

10.1 Trouble shooting

Case of trouble	Possible cause	Possible procedure
No lubricant on the cutting edge of the tool	Compressed air interrupted	▶ Check compressed air supply
	Hoses or lines defective	▶ Check hoses and lines
	Pump closed	▶ Check pump setting. ▶ If necessary readjust the pump.
	Defective pump	▶ Check pump, replace it if necessary
Frequency generator does not cycle	Frequency setting on „0“	▶ Check and adjust frequency generator
	Compressed air interrupted	▶ Check compressed air supply
	Defective hoses	▶ Check hoses

Tab. 12 Trouble shooting

11 Decommissioning and disposal of Minibooster

11.1 Final decommissioning of Minibooster

⚠ WARNING!

Risk of injury by unqualified dismantling e.g. by

- Unbriefed personnel
- Dangerous residual materials
- Stored (electric) energy.
- Breaks during dismantling.

▶ Dismantling only by qualified personnel.
▶ Wear suitable personal protective equipment.
▶ Appropriate disposal of components and residual materials!

▶ Switch off Minibooster.
▶ Disconnect power supply from higher-level control cabinet by qualified electrician.
▶ Switch off and disconnect compressed air supply.
▶ Empty lubricant carefully and dispose of it appropriately.

11.2 Disposal of Minibooster and operating materials

⚠ WARNING!

Risk of injury by unqualified disposal e.g. by

- Unbriefed personnel
- Dangerous residual materials

▶ Disposal only by briefed personnel.
▶ Wear suitable personal protective equipment.
▶ Appropriate disposal of components and residual materials!

▶ Assign qualified personnel.
▶ Wear personal protective equipment.
▶ Empty residual materials carefully and dispose of them appropriately.

Liquids	
Lubricants	Environmentally compatible disposal as special waste
Cleaning media	Environmentally compatible disposal as special waste
Miniboosters	
Wires, electric components	Disposal as electronic waste
Mechanical components	Sorted disposal

Tab. 13 Disposal

12 List of spare parts and durables

12.1 Survey

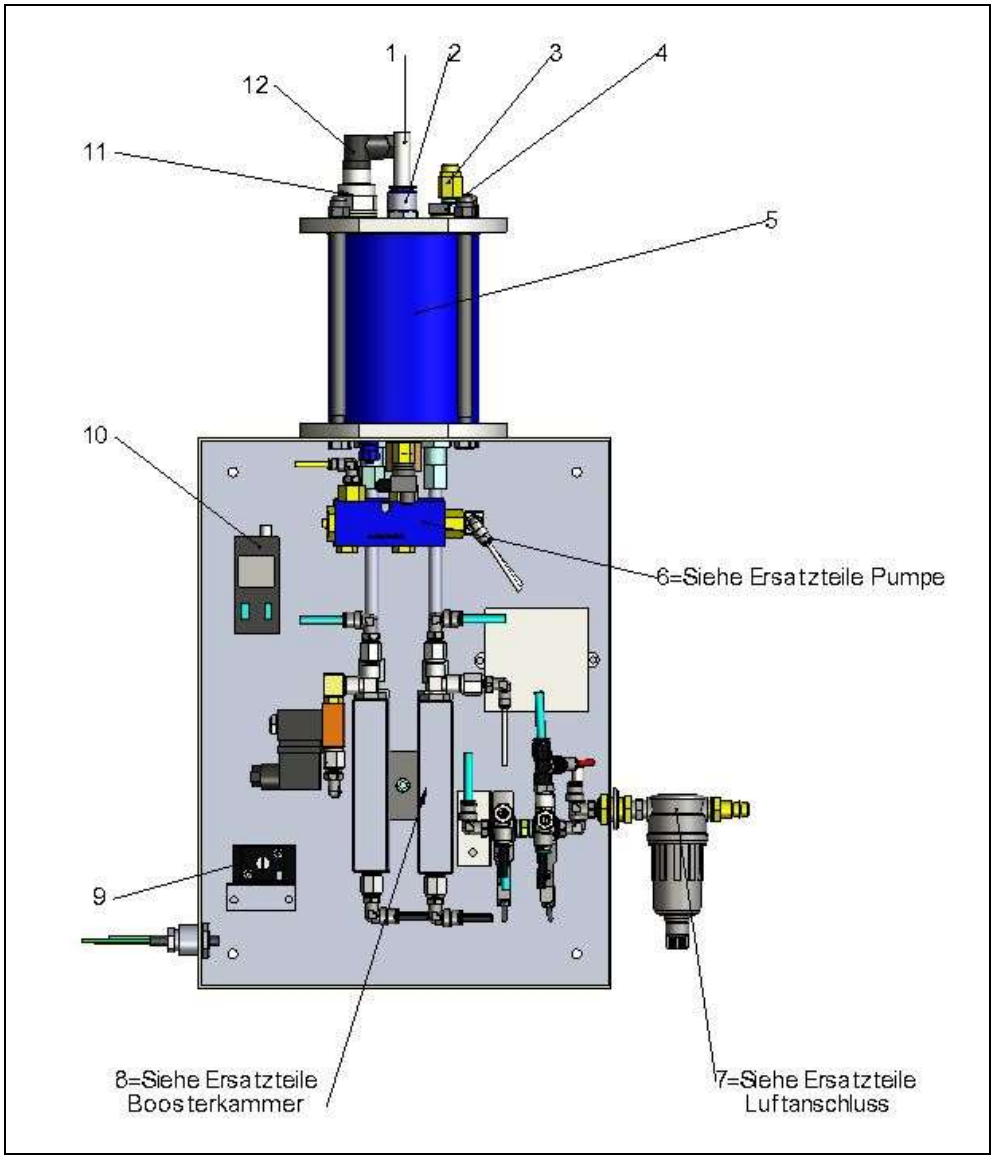


Abb. 13 Spare parts (survey) Minibooster

Pos.	Qty.	Description	Item-no.
1	1	Festo-hose PUN silver 12mm	800 528
2	1	Plug-in fitting G3/8“-12mm	803 615
3	1	Mini safety valve G1/8	801 730
4	1	Screw-plug with DIN-SYM	801 685
5	1	PVC-glass for 1-litre-reservoir L = 165mm	803 010
5	1	PVC-glass for 2-litre-reservoir L = 270mm	803 015
6		See spare parts for pump	
7		See spare parts for air connection	
8		See spare parts for Booster chamber	
9	1	Frequency generator	800 099
10	1	Pressure sensor	806 530
11	1	Level indicator closer type 1,0-litre-reservoir	801 500
11	1	Level indicator closer type 2,0-litre-reservoir	801 520
11	1	Level indicator opener type 1,0-litre-reservoir	801 501
11	1	Level indicator opener type 2,0-litre-reservoir	801 521
12	1	Plug for level indicator	801 235

Tab. 14 Spare parts Minibooster

12.2 Spare parts for the pump

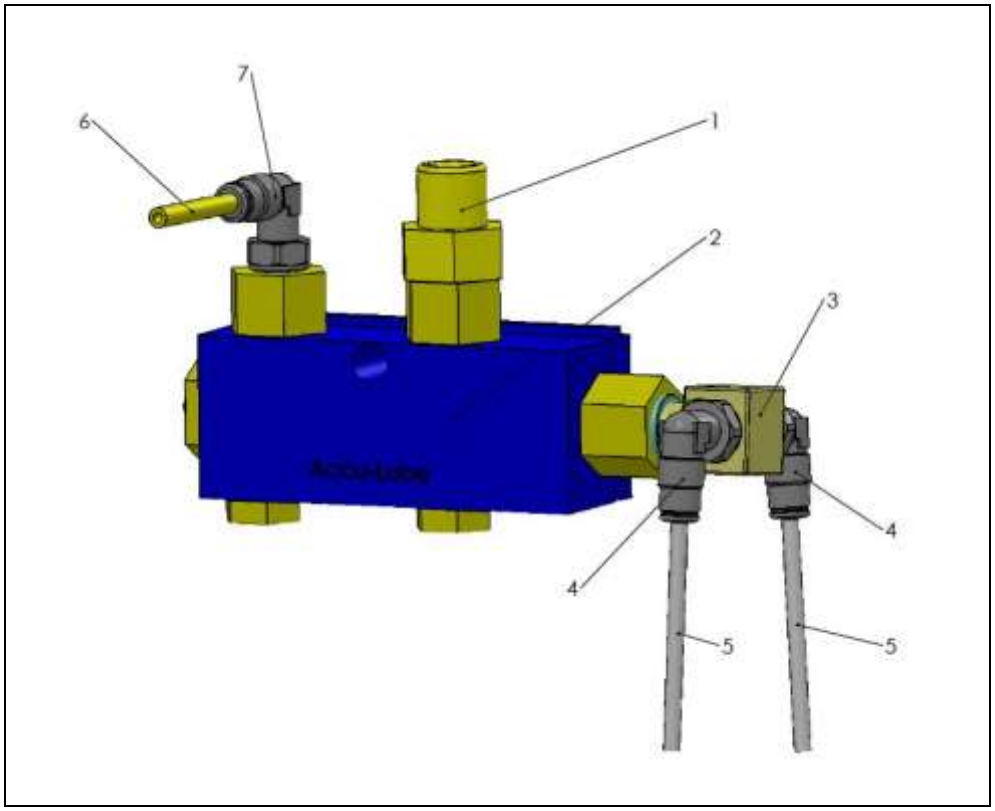


Abb. 14 Spare parts for the pump

Pos.	Qty.	Description	Item no.
1	1	Double nipple detachable	800 375
2	1	Aluminium pump	804 200
3	1	T-piece G 1/8“-1/8“	800 865
4	2	Screw-in/plug-in elbow piece	800 333
5	2	Oil hose	800 515
6	1	Festo-hose yellow 4x0,75	800 522
7	1	Screw-in/plug-in elbow piece	800 315

Tab. 15 Spare parts for the pump

12.3 Spare parts for the air connection

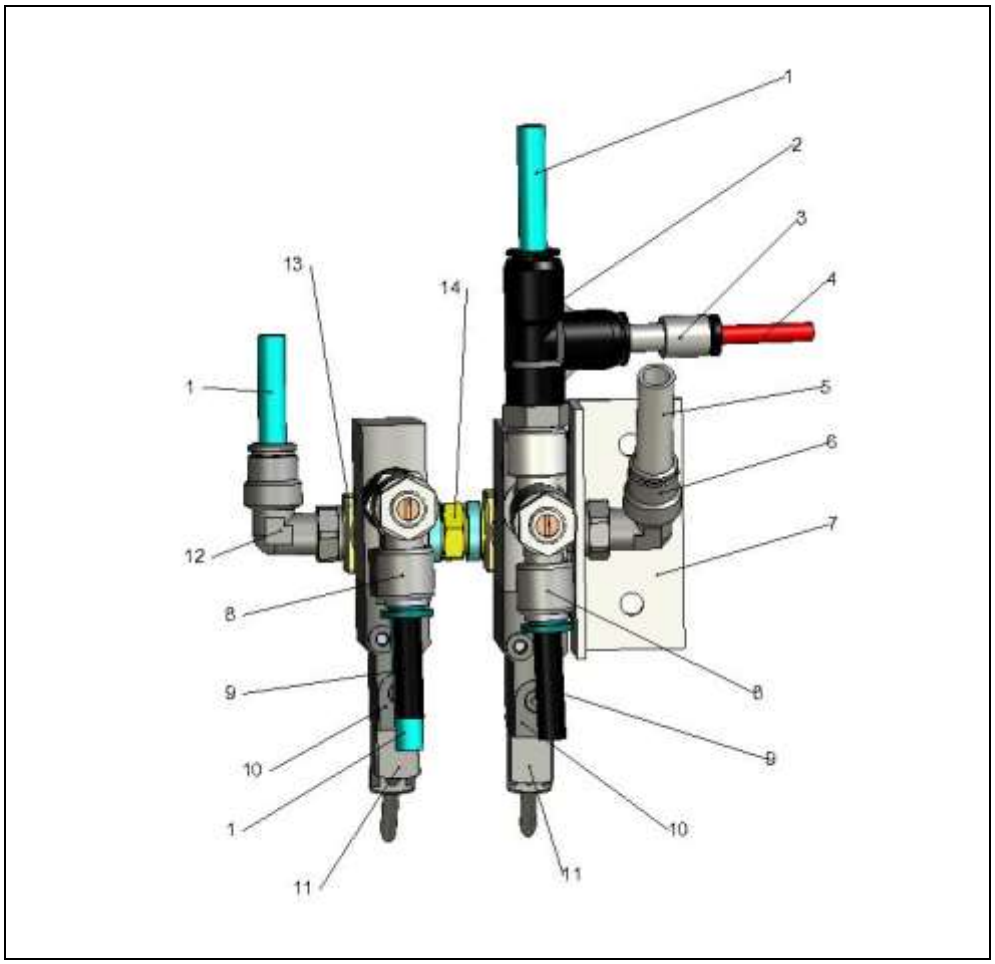


Abb. 15 Spare parts for the air connection

Pos.	Qty.	Description	Item-no.
1	3	Festo-hose blue 6x1	800 526
2	1	T-piece G1/8“-6-6	800 290
3	1	Reduction piece 6-4	800 620
4	1	Festo-hose red 4x0,75	800 523
5	1	Hose transparent 8x6x1,25	800 521
6	1	Screw-in/plug-in elbow piece	800 326
7	1	Mounting angle	800 125
8	2	Throttle check valve	801 680
9	2	Festo-hose black 6x1	800 540
10	2	Solenoid valve	800 123
11	2	Plug for solenoid valve	800 122
12	1	Screw-in/plug-in elbow piece	801 690
13	2	T-piece G1/8“-G1/8“	800 865
14	1	Double threaded nipple G1/8“-G1/8“	800 305

Tab. 16 Spare parts for the air connection

12.4 Spare parts for the Booster chamber

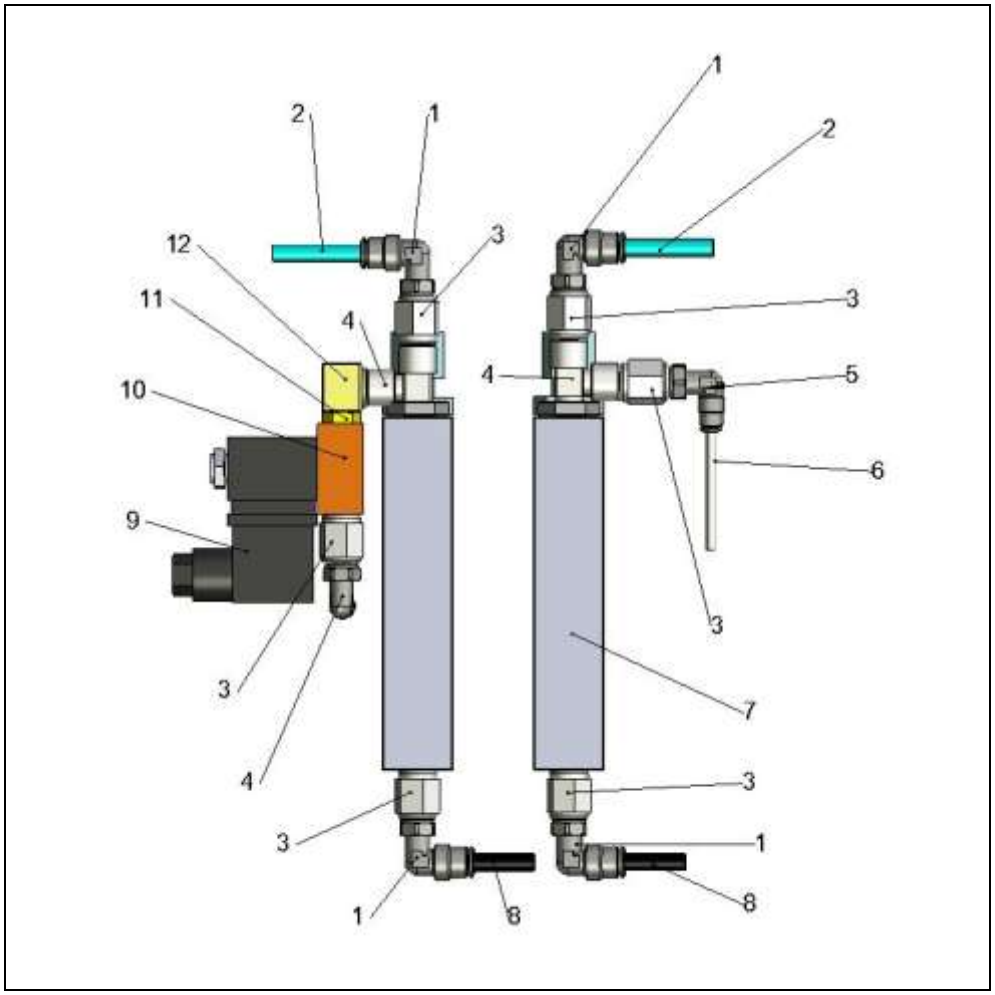


Abb. 16 Spare parts for the Booster chamber

Pos.	Qty.	Description	Item-no.
1	2	Screw-in/plug-in elbow piece	801 690
2	1	Festo-hose blue 6x1	800 526
3	3	Non-return valve	800 991
4	1	T-piece IIA inside-inside-G1/8“	800 275
5	1	Screw-in/plug-in elbow piece	800 333
6	1	Oil hose	800 515
7	1	Booster chamber	801 151
8	1	Festo-hose black 6x1	800 540
9	1	Coil for 2/2-way-valve	800 108
10	1	2/2-way-valve	800 107
11	1	Double threaded nipple G1/8“-G1/8“	800 305
12	1	Elbow piece inside-outside G1/8“	800 866

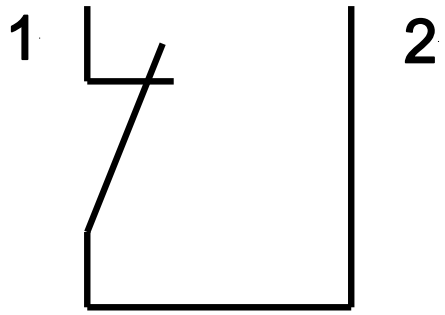
Tab. 17 Spare parts for the Booster chamber

12.5 Wiring schemes for the level indicator

Engler

Wiring diagram opener type
Mini float switch
Type: M60.1.B4.100.02.01.1
Ref.: 009600001100001

M12 – Connection



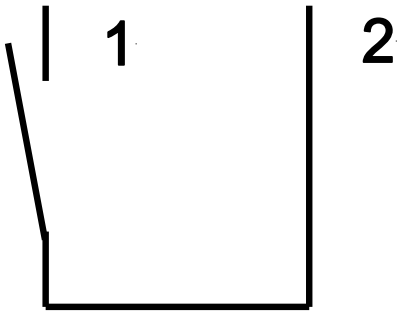
Function: B4 – opens with sinking level
24 V DC / 150mA

Abb. 17 Wiring scheme for the opener type

Engler

Wiring diagram closer type
Mini- float switch
Type: M60.1.B3.100.02.01.1
Ref. 009600001100001

M12-Connection



Function:B3 – closes with sinking level
24 V DC / 150mA

Abb. 18 Wiring scheme for the closer type

13 EC Declaration of conformity

Manufacturing GmbH

Einbauerklärung
im Sinne der EG-Richtlinie Maschinen 2006/42/EG Anhang II, 1 B

Hersteller	**In der Gemeinschaft ansässige Person, die Bevollmächtigt ist, die relevanten Technischen Unterlagen zusammenzustellen**
Accu-Lube Manufacturing GmbH Glattstrasse 29 75433 Maulbronn-Schmie **Tel.: (+49) 07043 5612**	**Accu-Lube Manufacturing GmbH** Glattstrasse 29 75433 Maulbronn-Schmie **Tel.: (+49) 07043 5612**

Beschreibung und Identifizierung der unvollständigen Maschine

Produkt/ Erzeugnis	Minibooster
Baujahr	2016

Es wird erklärt, dass die folgenden grundlegenden Anforderungen der Maschinenrichtlinie 2006/42/EG erfüllt sind.
1.1.2, 1.1.3, 1.1.5, 1.2.6, 1.3., 1.3.2, 1.3.4, 1.3.9, 1.5.1, 1.5.2, 1.5.3, 1.5.4, 1.5.6, 1.5.8, 1.5.13, 1.5.15, 1.7.2, 1.7.3, 1.7.4

Ferner wird erklärt, dass die speziellen technischen Unterlagengemäß Anhang VII Teil B erstellt wurden.

Es wird ausdrücklich erklärt, dass die unvollständige Maschine allen einschlägigen Bestimmungen der folgenden weiteren EG/EU-Richtlinien entspricht.

2014/30/EU	Richtlinie 2014/30/EU des Europäischen Parlaments und des Rates vom 26 Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit (Neufassung)

Fundstelle der angewandten harmonisierten Normen entsprechend Artikel 7 Absatz 2

EN ISO 12100:2010-11	Sicherheit von Maschinen-Allgemeine Gestaltungsleitsätze- Risikobewertung und Risikominderung (ISO 12100:2010)
EN 809:2012-10	Pumpen und Pumpengeräte für Flüssigkeiten – Allgemeine sicherheitstechnische Anforderungen
EN 4414:2011-04	Sicherheit von Maschinen – Sicherheitstechnische Anforderungen an fluidtechnische Anlagen und deren Bauteile – Pneumatik
EN 61000-6-4**:2011-09	Elektromagnetische Verträglichkeit (EMV); Fachgrundnorm Störaussendung; Teil 6-4: Industriebereich
EN 61000-6-2**:2006-03	Elektromagnetische Verträglichkeit (EMV) Teil 6-2: Fachgrundnormen: Störfestigkeit: Industriebereich

Der Hersteller bzw. der Bevollmächtigte verpflichtet sich, einzelstaatlichen Stellen auf begründetes Verlangen die speziellen Unterlagen zu der unvollständigen Maschine zu übermitteln. Die gewerblichen Schutzrechte bleiben hiervon unberührt!

Wichtiger Hinweis! Die unvollständige Maschine darf erst dann in Betrieb genommen werden, wenn gegebenenfalls festgestellt wurde, dass die Maschine, in die die unvollständige Maschine eingebaut werden soll, den Bestimmungen dieser Richtlinie entspricht.

Maulbronn-Schmie, 20.04.2016
(Ort, Datum)

(Herr Jürgen Uhlarz,
Geschäftsleitung)

**) Zutreffend nur bei Ausführung mit Elektromagnetventil oder elektronischem Frequenzgeber.

Abb. 19 EC Declaration of conformity

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