

Operating Manual

PFT INJECTION HOODS / LEVEL INDICATOR Safety - Overview - Operation - Spare parts lists



Article number Injection Hood:
20 60 02 13



Article number Injection Hood:
00 04 43 34



Article number Injection Hood:
00 42 06 64



Article number of the operating manual: 00 08 07 87



Read the operating manual prior to starting any work!

© Knauf PFT GmbH & Co. KG
P.O. Box 60 97343 Iphofen
Einersheimer Straße 53 97346 Iphofen
Germany

Phone +49 9323 31-760
Fax +49 9323 31-770
Technical hotline +49 9323 31-1818
info@pft-iphofen.de
www.pft.eu



1 Examination	5	9.1 Safety	20
1.1 Examination by machine operator	5	9.2 Disassembly	21
1.2 Periodic inspection	5	10 Disposal	21
2 General information	6	11 Technical data Injection Hoods E 1	22
2.1 Information regarding the operating manual	6	11.1 General information	22
2.2 Keeping the manual for future reference....	6	11.2 Power connection	22
2.3 Information regarding the safety instructions	6	11.3 Operating conditions	22
2.4 Symbol explanation	6	12 Technical data Injection Hoods G 5	22
2.5 Restriction of liability	8	12.1 General information	22
2.6 Copyright	8	12.2 Power connection	22
2.7 Spare parts	9	12.3 Operating conditions	22
2.8 Customer service	9	13 Technical data Injection Hoods E 1 with rocker arm	23
3 Safety	9	13.1 General information	23
3.1 Responsibility of the operator	9	13.2 Power connection	23
3.2 Operating personnel	10	13.3 Operating conditions	23
3.3 Unauthorised personnel	11	13.4 Sound power level	23
3.4 Intended use	11	13.5 Vibrations	23
3.5 Personal protective equipment	12	14 Example: Injection hood G 5 Silomat connection	24
3.6 Special risks	13	15 Feeding dry material to the machine	25
3.7 Safety equipment	15	16 Monitoring the machine	25
3.8 Reaction in case of danger and in case of accidents	15	17 Description level indicator	26
3.9 Labelling	15	17.1 Intended use level indicator	26
4 Transport, packing and storage	16	17.2 Construction level indicator	26
4.1 Safety instructions for transport	16	17.3 Function level indicator	26
4.2 Transport inspection	16	18 Using the level indicator	26
5 Packaging	17	18.1 Commissioning of the level indicator	26
6 Operation	17	18.2 Normal operation	27
6.1 Safety	17	18.3 Improper use	27
7 Maintenance	19	19 Maintenance and repair of the level indicator	27
7.1 Safety	19	19.1 Maintenance of the level indicator	27
7.2 Measures after effected maintenance	19	19.2 Repair of the level indicator	27
8 Demontage	20	20 Storage	27
9 Disassembly	20		

Inhaltsverzeichnis

21 Disposal	27	26.4 Spare parts list G 5 injection hood cpl. 00044334	35
22 Installation of injection hood.....	28	26.5 Drawing Injection hood E1 with rocker arm 00420676.....	36
22.1 Put injection hood on G 4	28	26.6 Spare parts list injection hood with rocker arm G 4 00420676.....	37
22.2 Connection example of injection hood ...	28	26.7 Spare parts list E 1 injection hood with rocker arm 00420664 see page 32/33 ...	37
23 Hazardous dusts	29	26.8 Drawing Injection hood Monojet 20600202.....	38
24 Assembly injection hood E 1 20600214.....	30	26.9 E Einblashaube Monojet 20600202	39
25 Assembly injection hood G 5 00044334	31	26.10 Level indicator 42 V aluminium type II 00099340	40
26 Spare parts drawings / lists	32	26.11 Spare parts list Level indicator 42V type II	41
26.1 Drawing E1 injection hood cpl. 20600213	32	27 Index	42
26.2 Spare parts list E1 injection hood cpl. 20600213	33		
26.3 Drawing G 5 injection hood cpl. 00044334	34		



1 Examination

1.1 Examination by machine operator

- Prior to each shift, the machine operator has to examine the effectiveness of the control and safety devices as well as the proper fitting of the protection devices.
- The safe working condition of construction machinery has to be checked by the machine operator during operation.
- If the safety devices show any defects or if any other defects are detected that compromise a safe operation, the supervisor has to be informed immediately.
- In case of defects that cause harm to persons, the operation of the construction machine has to be stopped to eliminate the defects.

1.2 Periodic inspection

- Construction machinery has to be inspected for their safe working condition in accordance with the operating conditions and the operational requirements as needed, however at least once a year by an expert.
- Pressure vessels have to undergo the prescribed expert inspections.
- The inspection results have to be documented and kept at least until the next inspection.

2 General information

2.1 Information regarding the operating manual

This operating manual gives important information on handling the device. A prerequisite for safe working is the observance of all stated safety guidelines and instructions.

Furthermore the local accident prevention guidelines and general safety instructions for the application area of the device are to be adhered to.

Read the operating manual thoroughly before starting any work! It is a part of the product and has to be kept near the tool and easily accessible to the staff at all times.

If the tool is given to third parties, also include the operating manual.

The figures in this manual are for presentation purposes of facts not necessarily to scale and may slightly differ from the actual model of the device.

2.2 Keeping the manual for future reference

The operating manual has to be available during the whole service life of the product.

2.3 Information regarding the safety instructions

These safety instructions give important information on handling the device. A prerequisite for safe working is the observance of all stated safety guidelines and instructions.

Furthermore the local accident prevention guidelines and general safety instructions for the application area of the device are to be adhered to.

Read the operating manual thoroughly before starting any work! It is a part of the product and has to be kept near the tool and easily accessible to the staff at all times.

If the tool is given to third parties, also include the operating manual.

The figures in this manual are for presentation purposes of facts not necessarily to scale and may slightly differ from the actual model of the device.

2.4 Symbol explanation

Warning signs

Warning signs can be identified in the operating manual by symbols. The signs are implemented by using signal words, which indicate the intensity of the danger.

Follow the signs unconditionally and work with care to avoid accidents, injuries or material damage.



DANGER!

... indicates an immediate dangerous situation, which leads to severe injuries or death if not averted.

**WARNING!**

... indicates a possibly dangerous situation, which may lead to severe injuries or death if not averted.

**ATTENTION!**

... indicates a possibly dangerous situation, which may lead to minor injuries if not averted.

**ATTENTION!**

... indicates a possibly dangerous situation, which may lead to material damage if not averted.

Tips and suggestions**NOTE!**

... indicates useful tips and suggestions as well as information for efficient and problem-free operation.

Special safety instructions

The following symbols are used along with the safety instructions, in order to bring special risks to attention:

**DANGER!****Danger of death from electric current!**

... indicates life-threatening situations due to electric current. Non-adherence to safety instructions may cause severe injuries or even death.

The work to be carried out must be carried out only by an electrician.

2.5 Restriction of liability

All specifications and instructions in this manual have been compiled considering the applicable standards and regulations, the state of the art as well as our long-time expertise and experience.

The manufacturer is not responsible for any damage in the following cases:

- Non-compliance with the manual
- Improper use
- Appointing untrained staff
- Unauthorized modifying
- Technical modifications
- Use of non-standard spare parts

The actual scope of delivery may vary from the descriptions and illustrations given here in case of special deliveries, demand of additional order options or due to latest technical changes.

Otherwise, the obligations agreed upon in the delivery contract, the general terms and conditions as well as the delivery conditions of the manufacturer and the legal regulations applicable at the time of signing the contract, are applicable.

2.6 Copyright

Treat the operating manual as confidential. It is meant exclusively for the person operating the tool. Giving the operating manual to a third party without prior written consent from the manufacturer is strictly prohibited.



NOTE!

The contents, texts, drawings, images and other illustrations are copyright protected and are subject to the commercial copyrights. Every misuse can be penalised.

Duplication of any kind or in any manner - even in parts - as well as using or distributing the content is strictly prohibited without a written declaration from the manufacturer. Violations may lead to damage compensation. Other claims are reserved.

2.7 Spare parts

**WARNING!****Danger of injury due to wrong spare parts!**

Wrong or defective spare parts can cause damage, malfunctioning or total breakdown as well as hamper the safety.

Therefore:

- Use only original spare parts provided by the manufacturer.

Buy spare parts from an authorized dealer.

2.8 Customer service

Our customer hotline is available for technical help and information.

Information about the responsible contact person can be obtained at all times via telephone, fax, email or via Internet, also see manufacturer's address on page 2.

Besides this, our employees are always interested in new information and experiences, resulting from use and which can be useful for improving our products.

3 Safety

This section gives an overview of all important safety aspects for optimum protection of personnel as well as for safe and efficient operation.

Non-compliance with the working instructions and safety instructions in this manual can cause considerable damage.

3.1 Responsibility of the operator

The tool is used in the commercial field. The operator of the tool is therefore liable to follow the legal duties for occupational safety.

Apart from the occupational safety instructions in this operating manual, the safety, accident prevention and environment protection regulations must be adhered to. Here, the following is especially applicable:

- The operator must be aware of the applicable occupational safety provisions and determine the risks in a danger assessment, which are present due to special working conditions at the operational site of the tool. He must implement these in form of operating instructions for operating the tool.

- During the entire time of use, the operator must check if the operating instructions created by him comply with the current regulations and adjust them if required.
- The operator must regulate and fix responsibilities for installation, operation, maintenance and cleaning.
- The operator must ensure that all employees handling the tool have read and understood the operating manual. In addition to that, he must train the personnel at regular intervals and notify about the risks.

Furthermore, the operator is responsible to keep the tool in technically flawless condition at all times; the following is therefore applicable:

- The operator must ensure adherence to the maintenance intervals given in this operating manual.
- The operator must get all safety equipment regularly checked for proper functioning and completeness.
- The operator must provide the necessary protection gear to the personnel.

3.2 Operating personnel

3.2.1 Requirements



WARNING!

Danger of injury if not properly qualified!

Improper use can lead to severe injuries or considerable material damage.

Therefore:

- Only let the people mentioned in the respective sections of this manual carry out the special activities.
- When in doubt, consult experts.

The following qualifications are given for various work fields in the operating manual:

- **Trained person**
has been taught in training by the operator to carry out the work given by him and made aware of the possible risks when improperly handled.
- **Skilled personnel**
carry out the work allotted to them due to their technical qualification, skills and experience as well as knowledge of the relevant regulations and are aware of the possible risks on their own.

■ Electricians

carry out the work on electrical systems due to their technical qualification, skills and experience as well as knowledge of the relevant standards and regulations and are aware of the possible risks on their own.

An electrician is especially trained for the work field, in which he works, is qualified and knows the relevant standards and provisions.

Only those people must be allowed as personnel, who can be expected to do their work properly. Persons, who are under the influence of drugs, alcohol or any medication are not permitted.

Select people who comply with the directives of age and profession applicable at the operational site.

3.3 Unauthorised personnel



WARNING! Danger for unauthorised personnel!

Unauthorised persons not fulfilling the requirements given here, are not aware of the risks in the working area.

Therefore:

- Keep unauthorised persons away from the working area.
- When in doubt, speak to the persons and escort them out of the working area.
- Discontinue working until the unauthorised persons leave the work area.

3.4 Intended use

The injection hood has been designed exclusively for the intended use described here and constructed.

For connection to the PFT Silomat conveyor. Depending on the air separator needs with single or large Monofilter



WARNING!

Danger due to improper use!

Any case of use beyond the specified purpose of use and/ or any other sort of use of the tool can lead to dangerous situations.

Therefore:

- Use the tool only for the purpose specified.
- Always adhere to the usage directives of the material manufacturer.
- Strictly follow all instructions in this operating manual.

Claims of any kind due to damage caused by improper use will not be entertained.

The operator of the tool is entirely responsible for any damage arising from improper use.

3.5 Personal protective equipment

Wear protective gear is necessary while working in order to minimise health risks.

- Wear the appropriate gear for the work to be done at all times.
- Follow all signs in the working area regarding personal protective gear.

Wear at all times

Wear the following at all times for all kinds of work:



Protective clothing

is tightly fitting clothing with low tear strength, with narrow sleeves and without parts sticking out. It mainly helps to protect from getting stuck in moving machine parts.

Do not wear any rings, chains and other jewellery.



Safety shoes

for protecting from heavy parts that may fall and from slipping on slippery floors.



Protective goggles

to protect the eyes from parts that may fly around and liquid splashes.



Simple breathing mask

for protection from harmful dust.



Hearing protection

for protection from hearing deficiencies.

**Helmet**

for protection from parts and materials that may fall or fly onto the person.

**Protective gloves**

to protect the hands from friction, abrasion, cuts or severe injuries as well as from coming into direct contact with hot surfaces.

Wear for special work

While carrying out special work, special equipment is required. It is separately mentioned in the individual chapters of this manual. This special protective equipment is explained below:

**Face guard**

to protect the eyes and the entire face from flames, sparks or heat as well as from particles or exhaust gases.

3.6 Special risks

The residual risks are mentioned in the following section, which are obtained from the danger analysis.

Follow the safety instructions specified here and the warning instructions in the other chapters of the manual, in order to reduce the health risks and to avoid dangerous situations.

Discharged material**DANGER!**
Risk of injury from discharged material!

Discharged material may lead to injuries to the eyes and face.

Therefore:

- Always wear protective goggles.
- Always position yourself in such a way that you are not hit by the mortar being discharged.

Noise**WARNING!**
Hearing impairment due to noise!

The noise level generated in the work area can cause serious hearing impairment.

Therefore:

- Always wear ear protection while working.
- Check only in the danger zone as long as necessary.

Electric current



DANGER!
Danger of death from electric current!

There is danger of immediate death if live parts are touched. Damage to insulation or individual parts can be fatal.

Therefore:

- Switch off the power supply immediately if the insulation is damaged and arrange for repairs.
- Work on the electrical system must be carried out by qualified electricians only.
- Switch off the electrical system to work on it and ensure that the voltage has been cut off.
- Switch off the power supply before any maintenance, cleaning or repair work and secure from restarting.
- Do not shunt or decommission any fuses. Adhere to the correct ampere count when replacing fuses.
- Keep live parts moisture-free. It can lead to short-circuit.

Hazardous dusts



WARNING!
Health hazard caused by dust!

In the long term, inhaled dust can lead to lung damage or have other adverse health effects.

Therefore:

- Wear a simple breathing mask for all work in the danger zone.

Moving components



WARNING!
Risk of injury due to moving components!

Rotating and/or linear moving components can cause serious injuries.

Therefore:

- Do not touch moving parts or work on them during operation.
- Do not open covers during operation.
- Adhere to the follow-up time:
Before opening the covers, ensure that the parts are no longer moving.
- Wear tight fitting protective clothing in the danger zone.



3.7 Safety equipment



WARNING!

Danger of death due to non-functioning safety equipment!

The safety equipment ensures the highest level of safety in operation. Even if work processes become a little more complicated due to safety equipment, they must never be decommissioned. Safety is guaranteed only with intact safety equipment.

Therefore:

- Before starting work, check if the safety equipment is functioning properly and has been correctly installed.
- Use safety equipment at all times.
- Do not obstruct access to safety systems such as emergency stop buttons, pull cords etc.

3.8 Reaction in case of danger and in case of accidents

Preventive measures

- Always be prepared for accidents or fire!
- Keep First Aid equipment (first-aid box, bandages etc.) and fire extinguisher handy.
- Familiarize personnel with accident signalling equipment, first-aid and rescue equipment.
- Keep access routes free for emergency vehicles.

In case of falls: Act appropriately

- Activate emergency-stop immediately.
- Take first-aid measures.
- Recover persons from the danger zone.
- Inform responsible person at the operational site.
- Inform the doctor and/ or the fire brigade.
- Make access routes free for emergency vehicles.

3.9 Labelling

The following symbols and warning signs can be seen in the work area. They refer to the environment in which they are installed.

Transport, packing and storage



WARNING!

Danger of injury due to illegible symbols!

With time, the adhesive and the signs can become dirty and fade out in some other way.

Therefore:

- Keep all safety, warning and operating signs in easily legible condition.
- Immediately renew damaged signs or weakened adhesives.

4 Transport, packing and storage

4.1 Safety instructions for transport

Improper transport



ATTENTION!

Damage from improper transport!

Improper transport may cause substantial property damage.

Therefore:

- When unloading the packages on delivery as well as transport within the company pay attention and observe the symbols and instruction on the package.
- Use only the specified anchorage points.
- Remove packaging only shortly before the assembly.

4.2 Transport inspection

On receipt check the delivery immediately for completeness and transport damage.

In case of externally visible transport damage, proceed as follows:

- Do not accept the delivery or under reserve only.
- Note the extent of damage on the transport documentation or on the delivery note of the carrier.
- Initiate complaint process.



NOTE!

Report any defect as soon as it is detected. Claims for damages can be asserted only within the valid warranty period.



5 Packaging

For packaging

The individual packages have to be packed in accordance with the transport conditions to be expected. Only environmentally-friendly materials were used for the packaging.

The packaging should protect the individual components until the assembly from transport damage, corrosion and other damage. Therefore do not destroy the packaging and remove only shortly before the assembly.

Handling packaging materials

If no agreement for the recovery of the packaging has been made, separate materials according to type and size and reuse or recycle.



ATTENTION!

Environmental damage due to wrong disposal!

Packaging materials are valuable raw materials and in many cases they can be reused or reconditioned and recycled.

Therefore:

- Dispose of packaging materials in an environmentally-friendly way.
- Observe the applicable local disposal regulations. If required hand over the disposal to a specialist.

6 Operation

6.1 Safety

Personal protective equipment

The following protective equipment has to be worn for all operative work:

- Protective clothing
- Protective goggles
- Protective gloves
- Safety shoes
- Hearing protection



NOTE!

Further protective equipment that is to be worn when effective particular jobs will be pointed out separately in the warning instructions of this chapter.

Basic information**WARNING!****Danger of injury due to incorrect operation!**

Improper operation may lead to serious damage to persons or property.

Therefore:

- Carry out all operating steps according to the instructions in this user manual.
- Prior to starting your work, ensure that all covers and protection devices are installed and work as intended.
- Never deactivate protection devices during operation.
- Ensure order and cleanliness in the work area! Loose components and tools on top of another or lying about pose potential accident risks.
- Increased noise level may cause permanent hearing deficiencies. At close range of the machine 95 dB(A) can be exceeded due to operational conditions. Close range is a distance of less than 5 metres to the machine.



7 Maintenance

7.1 Safety

Personnel

- The maintenance works described here can be carried out by the operator, unless marked otherwise.
- Some maintenance work must only be carried out by specially trained technical personnel or exclusively by the manufacturer.
- Work on the electrical system must, in principle, be carried out only by electricians.

Basic information



WARNING!

Risk of injury due to improperly carried out maintenance work!

Improper maintenance can lead to severe injuries or considerable property damage.

Therefore:

- Ensure order and safety at the assembly site! Loose, stacked components or components lying about can cause accidents.
- If components were removed, ensure proper assembly, put back all fastening elements and observe torque indications for screws.

Secure against restarting



DANGER!

Danger to life from unauthorised restarting!

When working with the tool, there is the risk that the energy supply is switched on without authorisation. This poses a danger to life for the persons in danger area.

Therefore:

- Switch off all power supplies before starting any work and secure against restarting.

7.2 Measures after effected maintenance

1. After finishing the maintenance works and prior to switching on the machine, the following steps have to be carried out:
2. Check all previously loosened screw connections for secure fit.
3. Check if all previously removed safety systems and covers are properly reinstalled.
4. Ensure that all used tools, materials and other equipments were removed from the work area.
5. Ensure that all safety systems of the installation work perfectly.

8 Demontage

Nachdem das Gebrauchsende erreicht ist, muss das Gerät demontiert und einer umweltgerechten Entsorgung zugeführt werden.

9 Disassembly

After the useful service life has been reached, the device has to be dismantled and disposed of in an environmental-friendly manner.

9.1 Safety

Personnel

- Disassembly must be carried out only by specially trained technical personnel.
- Work on the electrical system must be carried out by qualified electricians only.

Basic information



WARNING!

Risk of injury in case of improper disassembly!

Stored residual energies, sharp components, points or edges at and inside the device or at the required tools might cause injuries.

Therefore:

- Prior to starting the works ensure that there is sufficient space.
- Carefully handle components with sharp edges.
- Ensure order and cleanliness at the working place! Loose components and tools on top of another or lying about, pose potential accident risks.
- Dismantle components correctly. Pay attention to partly high dead weight of the components. If required use lifting equipment.
- Secure components that they do not fall down or fall over.
- In case of doubt, consult the dealer.

Electrical system



DANGER!

Danger of death from electric current!

There is danger to life if you come in contact with live parts. Activated electrical components can carry out uncontrolled movements and cause serious injuries.

Therefore:

- Prior to beginning the disassembly, switch off the power supply and finally disconnect it.



9.2 Disassembly

Clean the device for phasing out and disassemble under observance of applicable health and safety rules as well as environmental regulations.

Prior to starting the disassembly:

- Switch off device and secure against restarting.
- Physically separate the complete energy supply to the device, discharge stored residual power.
- Remove operating supplies as well as remaining processing materials and dispose of in an environment-friendly way.

10 Disposal

If no agreement for the recovery or the disposal was made, recycle the disassembled components:

- Scrap metals.
- Recycle plastic elements.
- Dispose of remaining components, sorted according to the type of material.



ATTENTION!
Environmental damage in case of incorrect disposal!

Waste from electronic and electrical equipment, electronic components, lubricants and other auxiliary materials are subject to hazardous waste treatment and must be disposed of by specialised companies only!

The local authority or special waste management operators can supply information on environmentally-friendly disposal.

Technical data Injection Hoods E 1**11 Technical data Injection Hoods E 1****11.1 General information**

Article number: 20 60 02 13

Detail	Value	Unit
Weight	33,5	kg

11.2 Power connection

Detail	Value	Unit
Supply voltage 50Hz	42	V

11.3 Operating conditions

Environment

Detail	Value	Unit
Temperature range	2-40	°C
Relative humidity, max.	80	%

12 Technical data Injection Hoods G 5**12.1 General information**

Article number: 00 04 43 34

Detail	Value	Unit
Weight	30	kg

12.2 Power connection

Detail	Value	Unit
Supply voltage 50Hz	42	V

12.3 Operating conditions

Environment

Detail	Value	Unit
Temperature range	2-40	°C
Relative humidity, max.	80	%



Technical data Injection Hoods E 1 with rocker arm

13 Technical data Injection Hoods E 1 with rocker arm

13.1 General information

Article number: 00 42 06 64

Detail	Value	Unit
Weight	29,5	kg

13.2 Power connection

Detail	Value	Unit
Supply voltage 50Hz	42	V

13.3 Operating conditions

Environment

Detail	Value	Unit
Temperature range	2-40	°C
Relative humidity, max.	80	%

13.4 Sound power level

Guaranteed sound power level LWA	95dB (A)
----------------------------------	----------

13.5 Vibrations

Weighted effective value of acceleration to which the upper body parts are exposed <math><2.5 \text{ m/s}^2</math>
--

Example: Injection hood G 5 Silomat connection



14 Example: Injection hood G 5 Silomat connection

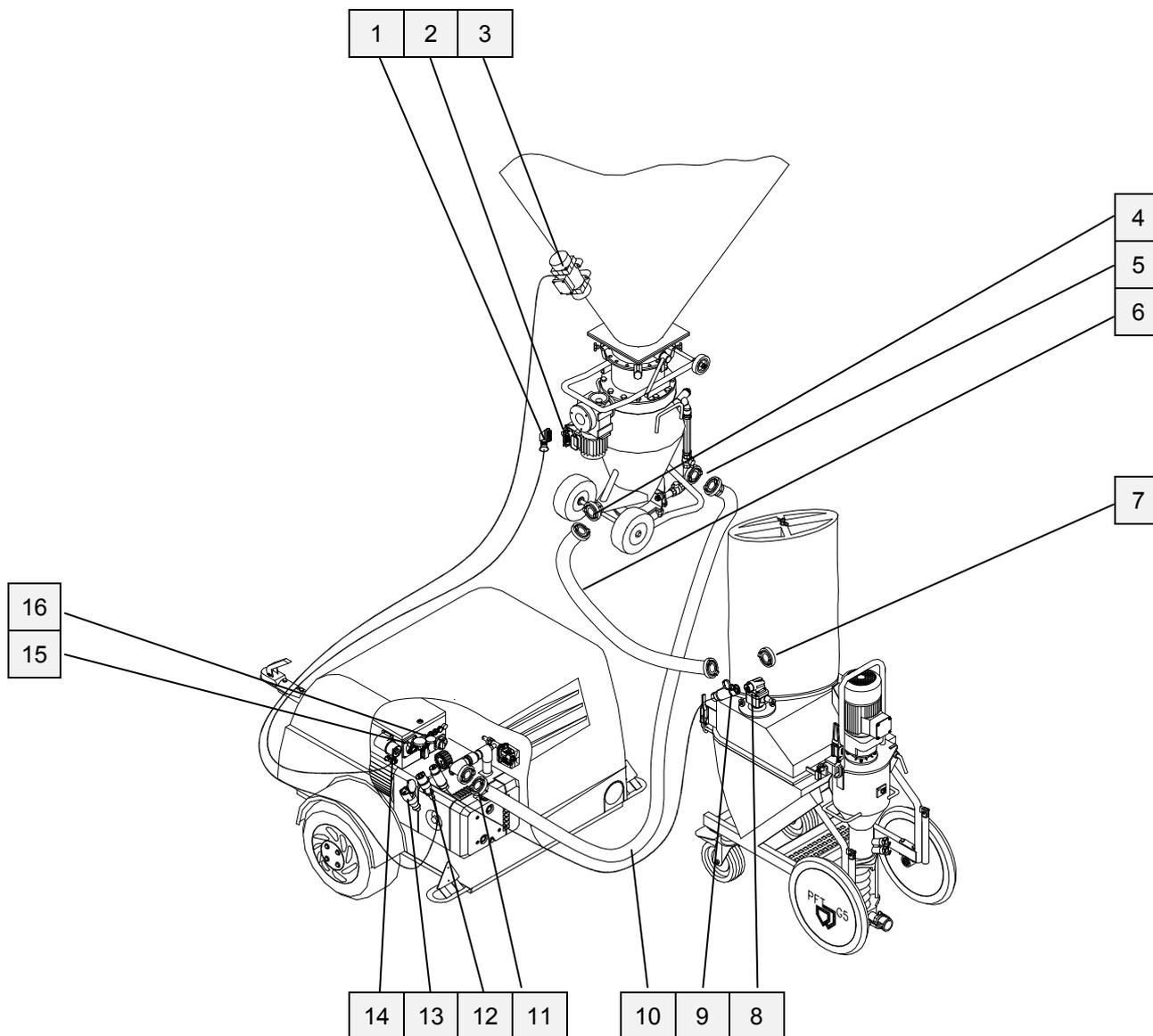


Fig. 1: Connection example

1. Control cable: control box – motor and drive	2. Motor and drive connection
3. Vibrato	4. Supply hose connection to conveying container
5. Connection: conveying air – compressor	6. Material hose, conveying container – injection hood
7. Supply hose connection to injection hood	8. Level sensor plug
9. Level sensor connection cable	10. Conveying hose: compressor – conveying container
11. Conveying air connection to conveying container	12. Vibrator connection cable
13. Main power connector	14. Main power socket
15. Vibrator socket	16. Level sensor socket



15 Feeding dry material to the machine



Fig. 2: Injection hood

Feeding with injection hood:

- Accessory article number 20 60 02 13
- Put the delivery hood instead of the grille cover.



DANGER!
Risk of injury at the star wheel!

Do not open the machine during pneumatic conveying. Before opening, turn off the master switch and interrupt the power supply.



NOTE!

First feed material to the mixing pump G 4 X. Pull the dummy connector or switch off the machine using pressure control air. Start your work only when the level sensor indicates full.

16 Monitoring the machine



DANGER!
Access by unauthorised persons!

The machine must be operated only if monitored.

Description level indicator



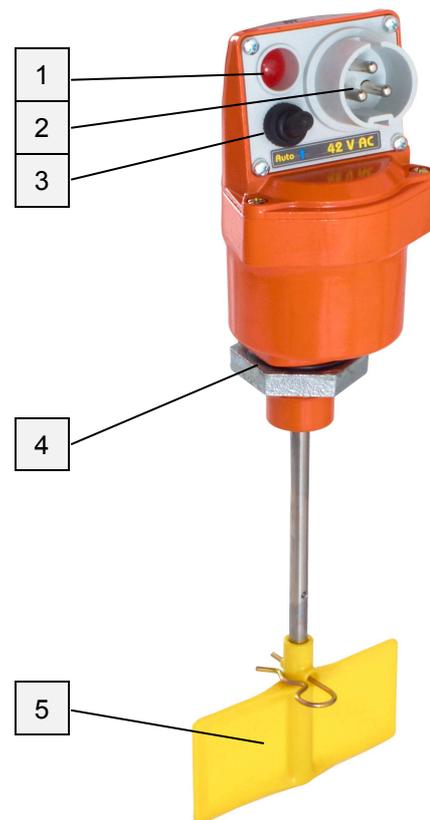
17 Description level indicator

17.1 Intended use level indicator

The electromechanical level limit switch is monitoring the filling level of bulk goods in hoppers silos etc.

17.2 Construction level indicator

- 1) The indicator (1) lights up when the wing (5) of the level indicator rotates and promotes Silomat plant material in the material hopper to the mixing pump.
- 2) Connector (2) of the control cable.
- 3) In "Auto" position (toggle switch (3) to the top) of the level indicator operates in automatic mode. Setting the switch (3) is pressed down, the functionality of the level indicator is switched off, for example when no more material is needed.
- 4) Clamping range in injection hood.
- 5) Blade for level indicator in the material hopper.



17.3 Function level indicator

The rotating blade for level indicator, projecting into the silo or container, is driven by a gearmotor.

If the bulk material is reaching the measuring blade, the rotation will be hindered and it will be stopped. In connection with the control cable for the system Silomat plant stopped after the conveying time the filling of the material hopper.

If the level drops and the blade is free to the blade begins to rotate again and there over the control cable the request to a new filling material in the material hopper to conveying.

18 Using the level indicator

18.1 Commissioning of the level indicator

1. Remove the level indicator into service only if it is properly installed and securely connected to the electrical connection.
2. During operation, the housing and the cable entry must be sealed.



18.2 Normal operation

1. Operate the level indicator only in its intended use.
2. Operate the level indicator within the specified temperature range.
3. If the level indicator is damaged, it must be placed out of service immediately.

18.3 Improper use

1. Not following the safety instructions and the operating instructions.
2. Operation of the level indicator in improper use.
3. Use of replacement parts that are not original.
4. Remove, add or change of components, provided they are not described in the manufacturer's documentation.
5. Violation of accepted standards and laws.

19 Maintenance and repair of the level indicator

19.1 Maintenance of the level indicator

1. The level indicator is maintenance free under normal use.
2. Remove deposits on the blade or the shaft with a brush or scraper. Not use force to damage the level indicator to avoid.
3. Regularly check the parts for wear.

19.2 Repair of the level indicator

1. Defective parts, connections or connections must be repaired immediately.
2. The second level indicator may not be used until full recovery or proper function.

20 Storage

1. Protect the level indicator from moisture and dust.

21 Disposal

1. The level indicator can be recycled.
2. For disposal, valid for the conditions of production and the location of the operator's environmental guidelines apply.

Installation of injection hood

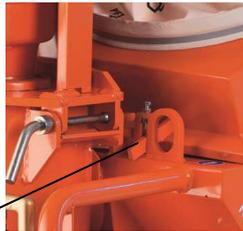


22 Installation of injection hood

22.1 Put injection hood on G 4



1. Insert the first injection hood in shooting at paper tray (1) and secure with screw.



2. Attach the second injection hood with the clamping levers (2) in the material hopper.

1

Fig. 3: Installation of injection hood

22.2 Connection example of injection hood



1. Connect material hose (1) to the conveying tank (2) and the injection hood (3).

1 2

3

Fig. 4: Connect material hose



2. Conveying air hose (4) to compressor air valve (5) and connect them to the conveying tank (6).

4 5

6

Fig. 5: Connect conveying air hose

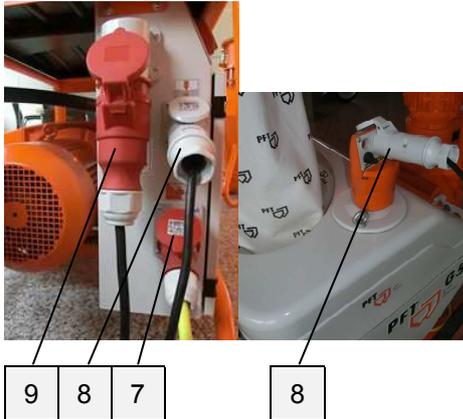


Fig. 6: Connections

3. Connection vibrator to vibrator socket (7).
4. Connect the control cable (8) between the level indicator and the outlet.
5. Connect the main power cable (9).



Fig. 7: Connection actuator

6. Connect the connecting cable (10) on the actuator (11).

23 Hazardous dusts



Fig. 8: Dust protection



Warning!

In the long term, inhaled dust can lead to lung damage or have other adverse health effects.



NOTE!

The machine operator or the person working in the dusty area always has to wear a dust protection mask when filling the machine!

The rules of the Committee on Dangerous Substances (AGS) can be found under Technical Rules for Dangerous Substances (TRGS 559).

24 Assembly injection hood E 1 20600214

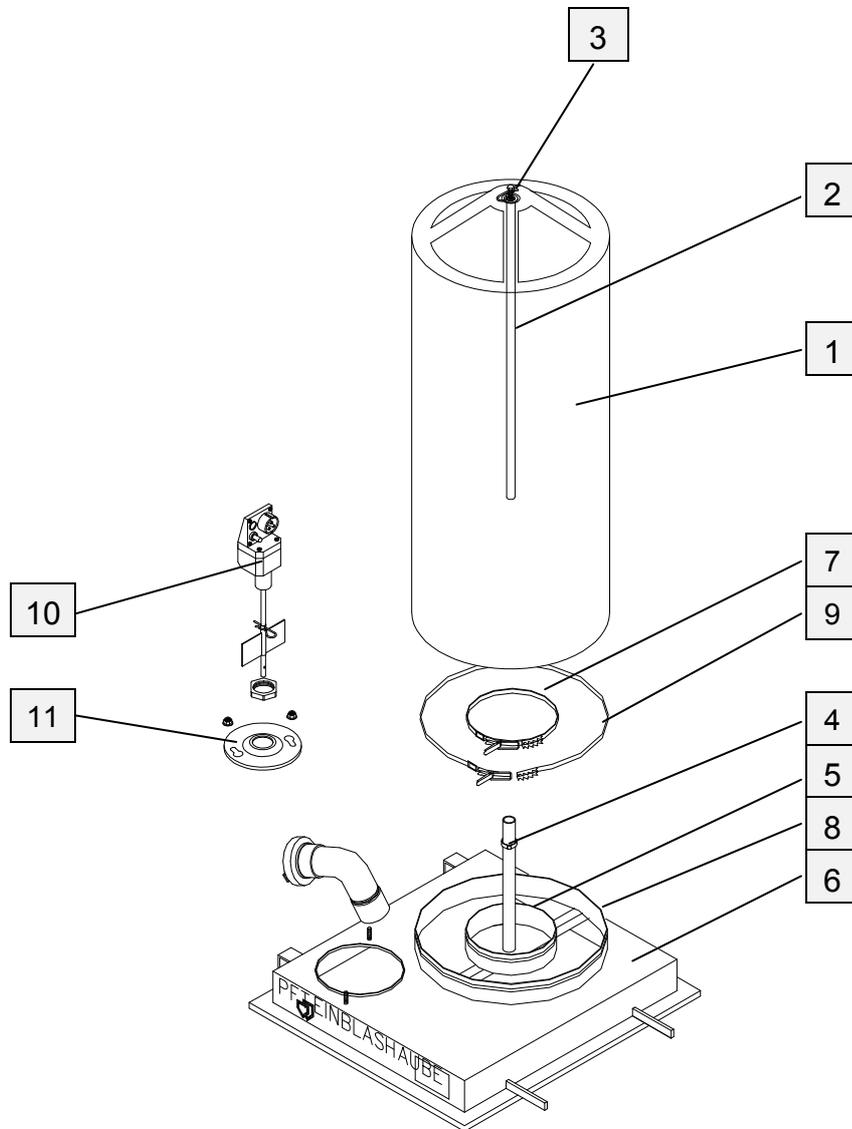


Fig. 9: Assembly injection hood E 1

- Put dust filter hose (1) to filter support (2) and with spring plug (3) secure.
- Put the filter support (2) with filter hose (1) in water / air hose (4).
- Evert small end of the filter tube (1) on the inner collar (5) of the cap body (6) and secure with the clamp (7).
- Evert large end of the filter tube (1) on the outer collar (8) of the cap body (6) and secure with retaining strap (9).
- Secure level indicator (10) with lock nut on the lid for level indicator (11).
- Screw cap for level indicator with level indicator (10/11) with hood body (6).



25 Assembly injection hood G 5 00044334

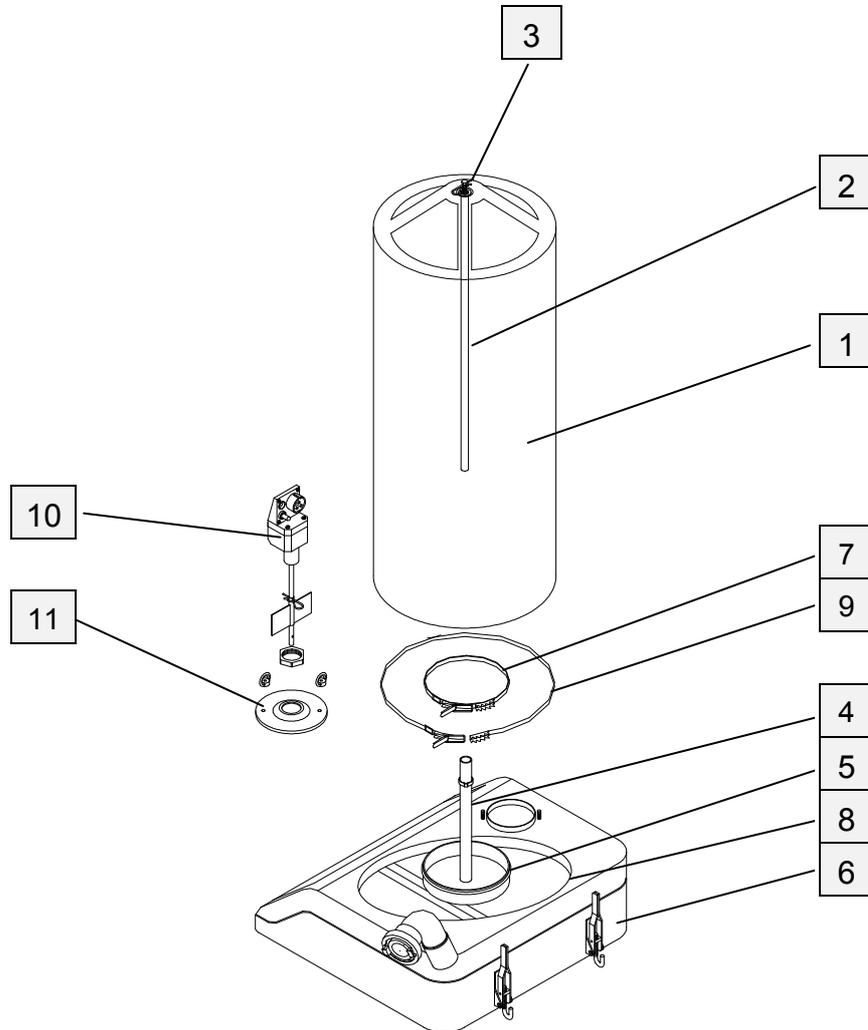
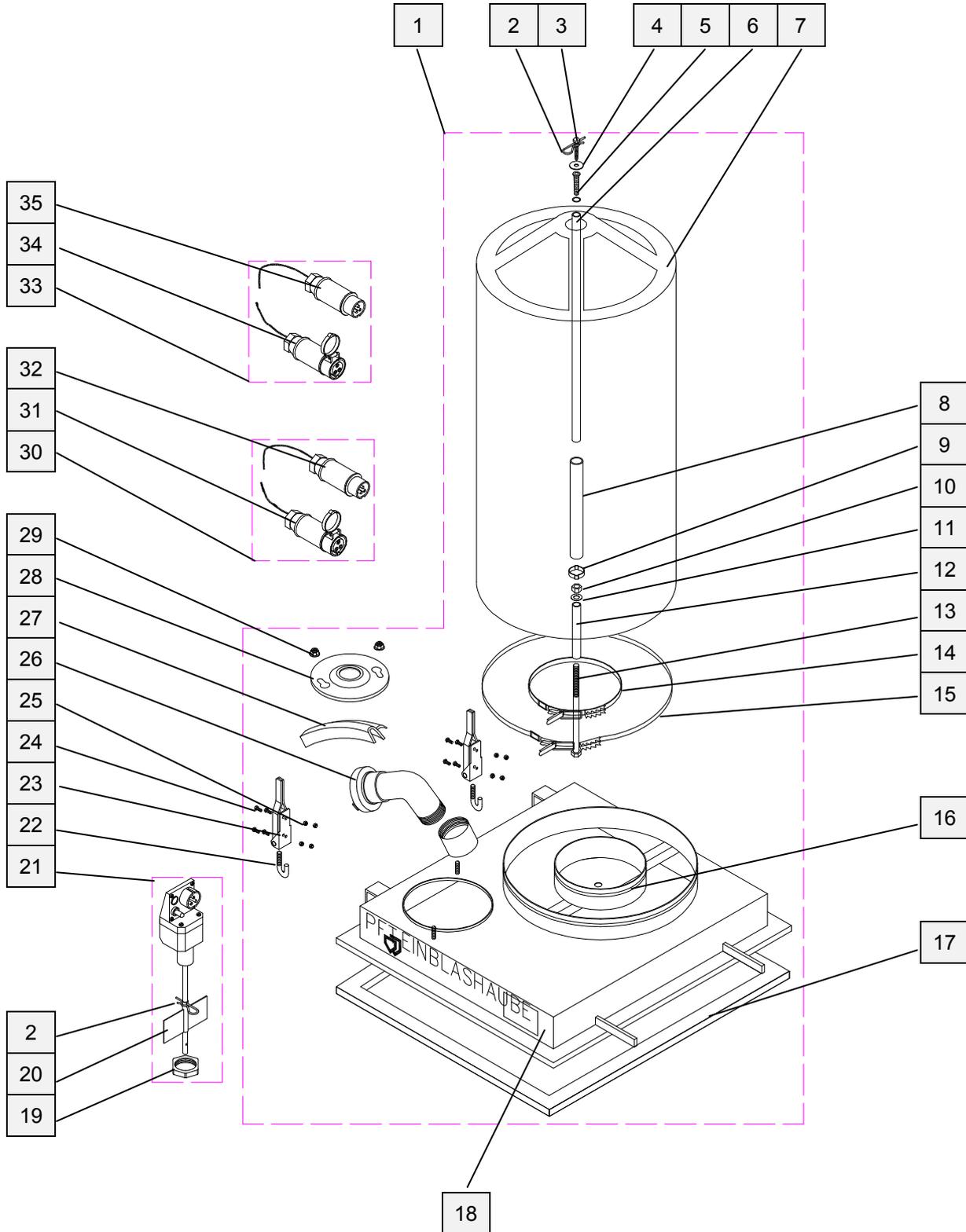


Fig. 10: Assembly injection hood G 5

- Put dust filter hose (1) to filter support (2) and with spring plug (3) secure.
- Put the filter support (2) with filter hose (1) in water / air hose (4).
- Evert small end of the filter tube (1) on the inner collar (5) of the cap body (6) and secure with the clamp (7).
- Evert large end of the filter tube (1) on the outer collar (8) of the cap body (6) and secure with retaining strap (9).
- Secure level indicator (10) with lock nut on the lid for level indicator (11).
- Screw cap for level indicator with level indicator (10/11) with hood body (6).

26 Spare parts drawings / lists

26.1 Drawing E1 injection hood cpl. 20600213



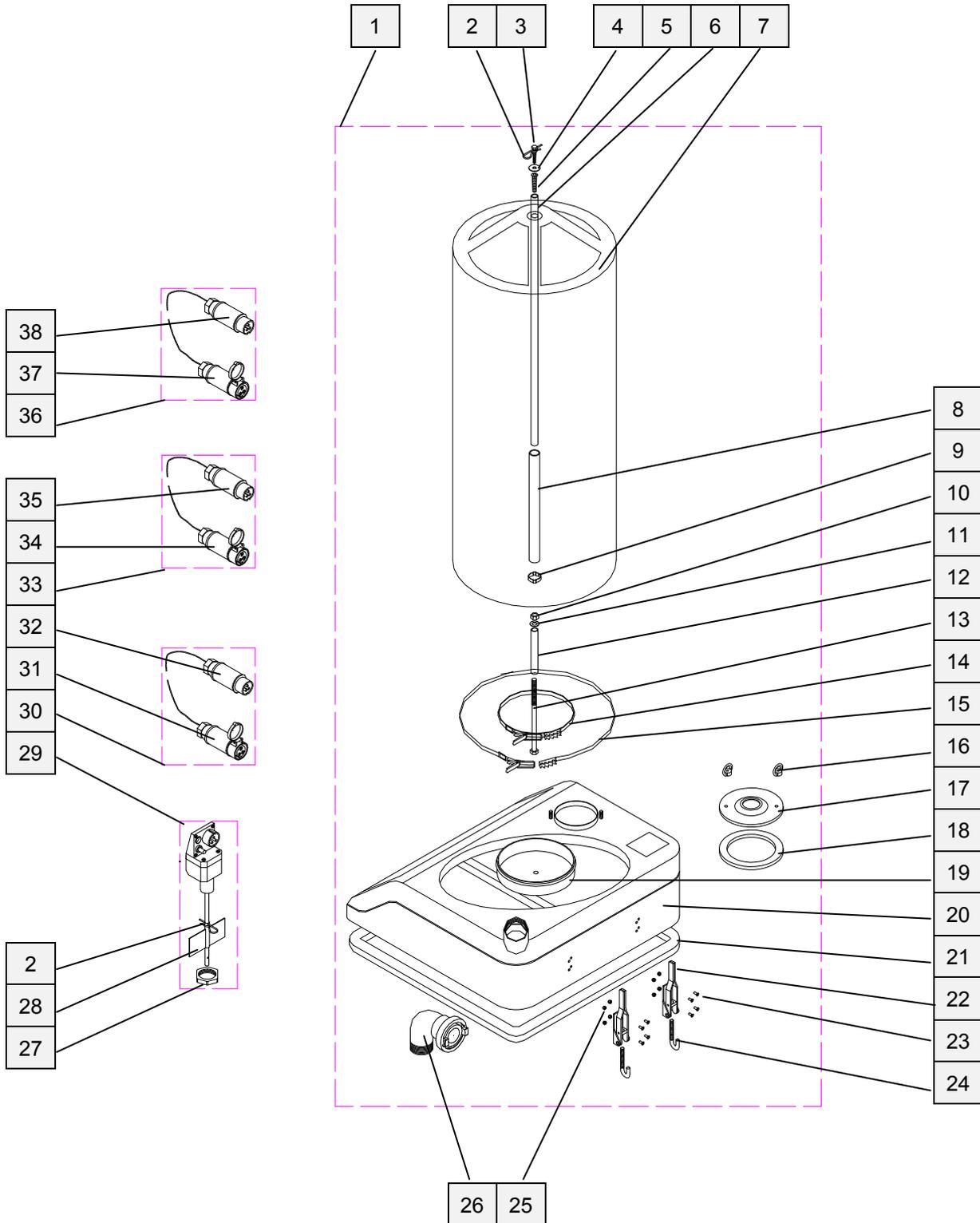


26.2 Spare parts list E1 injection hood cpl. 20600213

Item	Qty	Item no.	Article description
1	1	20 60 02 14	Body of injection hood cpl., for injection hood E 1 with round monofilter
2	2	20 60 68 05	Spring plug 3 mm
3	1	00 02 33 82	Hex screw 8 x 50 zinc-pl.
4	1	20 20 93 20	Washer 8,4 x 25 x 1,5 galv.
5	1	00 06 97 43	Dowel plug 4 AS-K 12/76
6	1	00 04 46 46	Monofilter filter column, round top (deep) 950 lg.
7	1	20 60 41 02	Filter sack D 420 x 1100 for E 1
8	1	00 04 46 51	Water/air hose 3/4" x 350 mm
9	1	20 20 29 00	Hose clip 28-31
10	2	20 20 69 00	Hex nut M12 zinc-plated
11	1	20 20 90 00	U disc B 13 zinc-plated
12	1	00 04 46 47	Steel pipe 18 x 2.5 x 140
13	1	00 04 27 74	Hex screw M12 x 240 zinc-pl. 80 mm
14	1	20 60 45 00	Tightening strap D=205mm
15	1	20 70 73 01	Tightening strap D=424mm
16	1	00 04 92 11	Filter sack holder, injection hood G 5, deep model, RAL 2004
17	1	20 60 05 70	Delivery hood sealing
18	1	00 06 04 40	Body of injection hood, injection hood G 4 RAL 2004
19	1	20 60 68 02	Nut 1 1/2" zinc-plated
20	1	00 00 15 51	Blade for level indicator SG12, 60 x 135mm (plastic)
21	1	00 09 93 40	Level indicator 42 V aluminium type II
22	2	00 08 34 10	Screw hook for cocking lever hook shortened L=110
23	2	20 60 23 01	Cocking lever galv.
24	8	20 20 70 96	Screw M5 x 12 zinc-pl.
25	8	20 20 66 02	Nut M5 zinc-pl.
26	1	00 45 00 87	Coupling C 2" ext. thread with bend 90° int. thread ext.
27	1	00 02 34 95	Gasket profile
28	1	00 06 00 08	Level sensor cover E 1, new RAL 2004
29	2	00 06 01 30	Flange nut M 8, zinc-plated, self-locking
30	1	20 42 38 00	Control cable 25 m with CEE plug and coupling 3 x 16 A, 12 h, white
31	1	20 42 94 00	CEE coupling 3 x 16 A, 12 h, white
32	1	20 42 82 00	CEE plug 3 x 16 A, 12 h, white
33	1	20 42 37 00	Control cable 50 m with CEE plug and coupling 3 x 16 A, 12 h, white
34	1	20 42 94 00	CEE coupling 3 x 16 A, 12 h, white
35	1	20 42 82 00	CEE plug 3 x 16 A, 12 h, white

Spare parts drawings / lists

26.3 Drawing G 5 injection hood cpl. 00044334

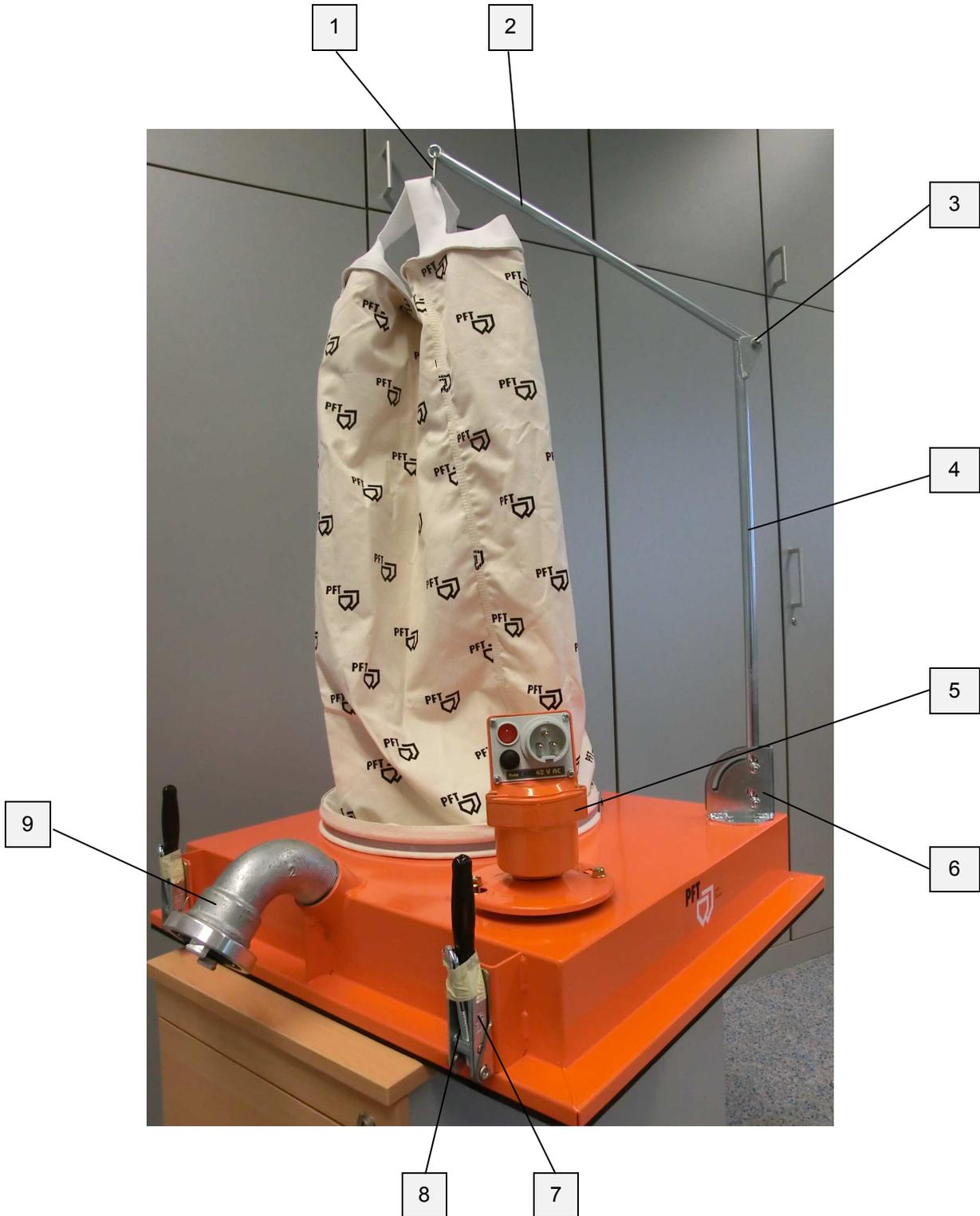




26.4 Spare parts list G 5 injection hood cpl. 00044334

Item	Qty	Item no.	Article description
1	1	00 04 43 48	Body of injection hood, injection hood, G 5 deep model, RAL 9002, cpl.
2	2	20 60 68 05	Spring plug 3 mm
3	1	00 02 33 82	Hex screw 8 x 50 zinc-pl.
4	1	20 20 93 20	Washer 8
5	1	00 06 97 43	Dowel plug 4 AS-K 12/76
6	1	00 04 46 46	Monofilter filter column, round top (deep) 950 lg.
7	1	20 60 41 02	Filter sack D 420 x 1100 for E 1
8	1	00 04 46 51	Water/air hose 3/4" x 350 mm
9	1	20 20 29 00	Hose clip 28-31
10	1	20 20 69 00	Hex nut M12 zinc-plated
11	1	20 20 90 00	U disc B 13 zinc-plated
12	1	00 04 46 47	Steel pipe 18 x 2.5 x 140
13	1	00 04 27 74	Hex screw M12 x 240 zinc-pl. 80 mm
14	1	20 60 45 00	Tightening strap D=205mm
15	1	20 70 73 01	Tightening strap D=424mm
16	2	20 20 79 50	Ring nut M8 zinc-pl.
17	1	00 00 82 43	Level sensor cover RAL 9002
18	1	00 04 72 40	Level sensor cover gasket G 5 deep
19	1	00 04 43 43	Filter sack holder, injection hood, G 5 deep model, RAL 9002
20	1	00 04 43 41	Body of injection hood, injection hood, G 5 deep model, RAL 9002
21	1	00 04 43 50	Sponge rubber gasket 20x30x2340, injection hood G 5 deep model
22	2	20 60 23 01	Tensioning lever
23	8	20 20 70 96	Screw M5 x 12 zinc-pl.
24	2	00 00 80 40	Hook for tensioning lever L=90 mm
25	8	20 20 66 02	Nut M5 zinc-pl.
26	1	00 45 00 87	Coupling C 2" ext. thread with bend 90° int. thread ext. thread
27	1	20 60 68 02	Nut 1 1/2" zinc-plated
28	1	00 00 15 51	Blade for level indicator 60 x 135mm SG12 (plastic)
29	1	00 09 93 40	Level indicator 42 V aluminium type II
30	1	20 42 38 50	Steuerkabel 5m mit CEE-Stecker und Kupplung 3 x 16A 12h weiss
31	1	20 42 94 00	CEE coupling 3 x 16 A, 12 h, white
32	1	20 42 82 00	CEE plug 3 x 16 A, 12 h, white
33	1	20 42 38 00	Control cable 25 m with CEE plug and coupling 3 x 16 A, 12 h, white
34	1	20 42 94 00	CEE coupling 3 x 16 A, 12 h, white
35	1	20 42 82 00	CEE plug 3 x 16 A, 12 h, white
36	1	20 42 37 00	Control cable 50 m with CEE plug and coupling 3 x 16 A, 12 h, white
37	1	20 42 94 00	CEE coupling 3 x 16 A, 12 h, white
38	1	20 42 82 00	CEE plug 3 x 16 A, 12 h, white

26.5 Drawing Injection hood E1 with rocker arm 00420676





26.6 Spare parts list injection hood with rocker arm G 4 00420676

Item	Qty	Item no.	Article description
1	1	20 02 70 23	Snap hook
2	1	00 42 75 94	Top joint rod injection hood galv.
3	3	20 20 78 01	Hex. screw M8 x 35 galv.
3	3	20 20 72 00	Safety nut M 8 galv.
3	3	20 20 93 13	Washer B 8,4 galv.
4	1	00 42 75 91	Joint rod below injection hood galv.
5	1	00 09 93 41	Level indicator 42V type SG30a with time lag
6	1	00 42 75 82	Lower hinge bracket joint for injection hood galv.
7	2	20 60 23 01	Cocking lever galv.
8	2	00 08 34 10	Screw hook for cocking lever hook shortened L=110
9	1	00 45 00 87	Coupling C 2" ext. thread with bend 90° int. thread ext.

26.7 Spare parts list E 1 injection hood with rocker arm 00420664 see page 32/33

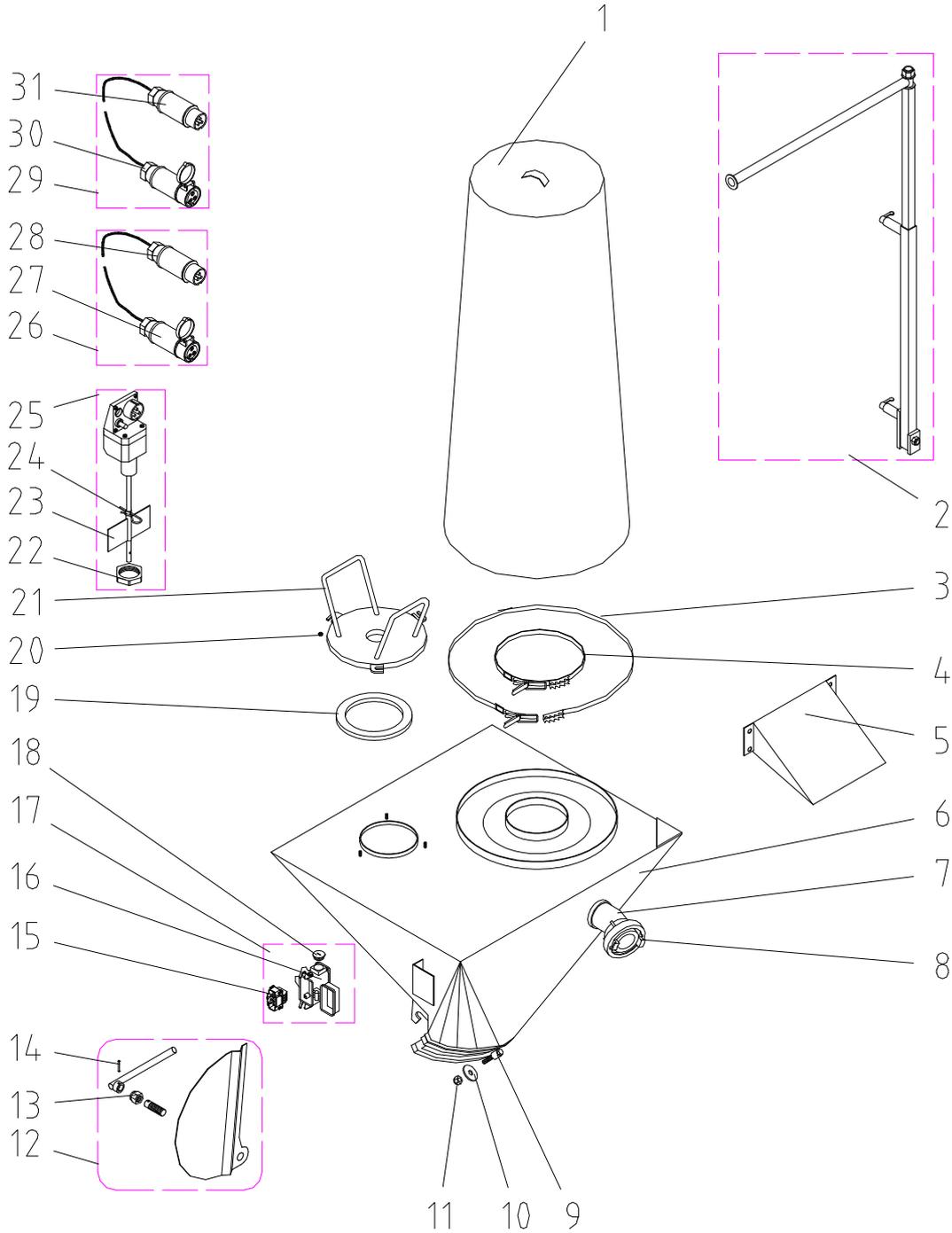
7	1	20 60 41 02	Dust filter hose 420 X 1100 for E 1 - see E 1 Item no. 20600213
14	1	20 60 45 00	Tightening strap D=205mm - see E 1 Item no. 20600213
15	1	20 70 73 01	Tightening strap D=424mm - see E 1 Item no. 20600213
16	1	00 04 92 11	Support filter injection hood G4 deep-drawn RAL2004 - see E 1 Item no. 20600213
17	1	20 60 05 70	Sealing injection / delivery hood E1 - see E 1 Item no. 20600213
18	1	00 06 04 40	Body injection hood G 4 RAL 2004 - see E 1 Item no. 20600213
27	1	00 02 34 95	Gasket profile EPDM 67 / 1011-10 - see E 1 Item no. 20600213
28	1	00 06 00 08	Cover level sensor E 1 NEW RAL 2004 - see E 1 Item no. 20600213
29	2	00 06 01 30	Nut with flange M 8 galv. self-locking - see E 1 Item no. 20600213
33	1	20 42 37 00	Control cable 50m with plug and coupling CEE 3 x 16A 12h white - see E 1 Item no. 20600213

Body of injection hood, complete with injection hood tilt rod G 4 RAL2004 Product number 00420676 is without:

- Control cable 50m with CEE-plug and coupling 3 x 16A 12h white item number 20423700
- Level indicator 42V time delay ALU TYPE I item number 00099341

26.8 Drawing Injection hood Monojet 20600202

Injection hood Monojet no longer available – no replacement



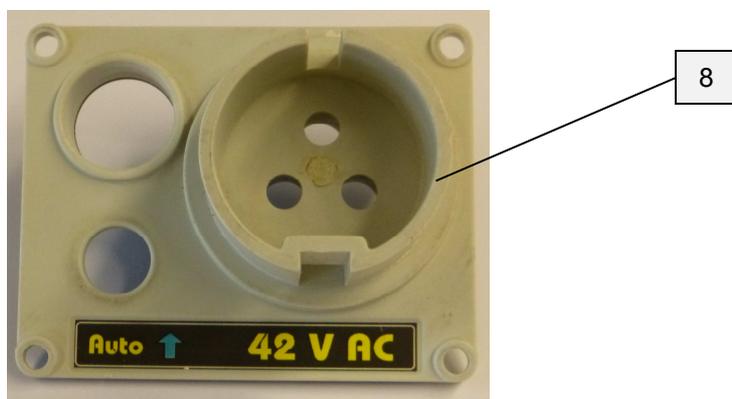
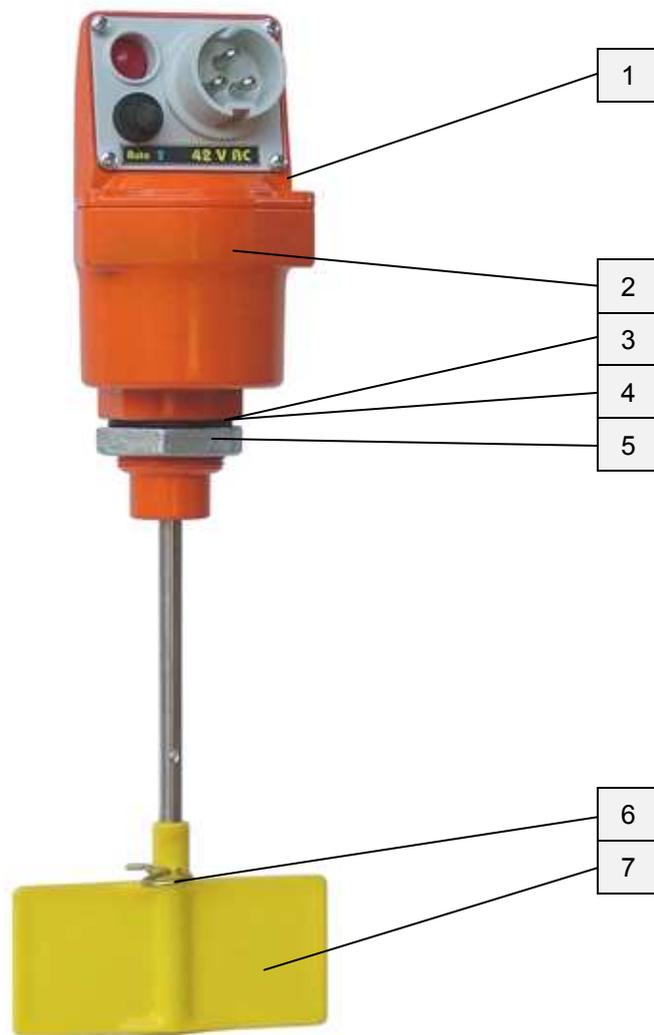


26.9 E Einblashaube Monojet 20600202

Injection hood Monojet no longer available – no replacement

Item	Qty	Item no.	Article description
1	1	20 60 44 00	MONOJET injection hood filter sack
2	1		Filter sack holder cpl. MONOJET. No longer available – no replacement
3	1	20 70 73 01	Tightening strap D=424mm
4	1	20 60 45 00	Tightening strap D=205mm
5	1		Plate for mono injection hood. No longer available – no replacement
6	1		MONOJET body of injection hood. No longer available – no replacement
7/8	1	00 45 00 87	Coupling C 2" ext. thread with bend 90° int. thread ext.
9	1	20 20 78 09	Hex screw M10 x 55 DIN zinc-pl.
10	0	20 20 93 19	Washer 13 x 37 x 3
11	1	20 20 72 10	Nut M10 zinc-pl.
12	1	20 10 81 30	Activation lever MONOJET hopper swivel flap
13	1	20 20 73 00	Nut M 16 zinc-plated
14	1	20 54 76 02	Dowel pin 5 x 36
15	1	20 42 84 07	Male insert 6-pin HAN 6 E
16	1	20 42 84 06	Panel mounted socket 6 pins HAN 6 E with cover
17	1	20 42 85 03	Bling plug 6-pin HAN 6 E
18	1	20 43 10 00	Stopper PG 16
19	1	00 04 72 40	Gasket for cover for level indicator, deep-drawn
20	1	20 20 62 00	Nut M6 zinc-pl.
21	1	20 60 25 02	Attachment lid for filling level indicator type SG06
22	1	20 60 68 02	Nut 1 1/2" zinc-plated
23	1	00 00 15 51	Blade for level indicator 60 x 135mm SG12 (plastic)
24	1	20 60 68 05	Retaining spring 3 mm
25	1	00 09 93 40	Level indicator 42 V aluminium type II
26	1	20 42 38 00	Control cable 25 m with CEE plug and coupling 3 x 16 A, 12 h, white
27	1	20 42 94 00	CEE coupling 3 x 16 A, 12 h, white
28	1	20 42 82 00	CEE plug 3 x 16 A, 12 h, white
29	1	20 42 37 00	Control cable 50 m with CEE plug and coupling 3 x 16 A, 12 h, white
30	1	20 42 94 00	CEE coupling 3 x 16 A, 12 h, white
31	1	20 42 82 00	CEE plug 3 x 16 A, 12 h, white

26.10 Level indicator 42 V aluminium type II 00099340





26.11 Spare parts list Level indicator 42V type II

Item	Qty	Item no.	Article description
1	1	00 13 97 10	Housing upper part cpl. 42 V ALU TYPE II
2	1	00 13 97 11	Housing lower part cpl. 42 V ALU TYPE II
3	1	on request	o-ring 150 x 46 x 3.5
4	1	on request	Sealing ring 26 x 7 x10
5	1	20 60 68 02	Counter nut 1 1/2"
6	1	20 60 68 05	Retaining spring 3 mm
7	1	00 00 15 51	Blade for level indicator SG12, 60 x 135mm (plastic)
8	1	00 57 91 77	Cover white TYP 42V-

27 Index

Accident	15	Improper use	27
Assembly injection hood E 1 20600214	30	Index	42
Assembly injection hood G 5	31	Information regarding the operating manual	6
Breathing protection	12	Information regarding the safety instructions	6
Commissioning of the level indicator	26	Installation of injection hood	28
Connection example of injection hood	28	Intended purpose	11
Construction level indicator	26	Intended use level indicator	26
Contact person	9	Keep the manual for future reference	6
Copyright	8	Level indicator 42 V aluminium type II 00099340	40
Customer service	9	Liability	8
Danger event	15	Maintenance	19
Demontage	20	Maintenance and repair of the level indicator	27
Description Level indicator	26	Maintenance of the level indicator	27
Disassembly	21	Measures after effected maintenance	19
Disassembly	20	Monitoring the machine	25
Disposal	21	Moving components	14
Disposal	27	Noise	13
Drawing E1 injection hood cpl. 20600213	32	Normal operation	27
Drawing G 5 injection hood cpl. 00044334	34	Operating conditions	22, 23
Drawing Injection hood E1 with rocker arm 00420676	36	Operating personnel	10
Drawing Injection hood Monojet 20600202	38	Operation	17
Electric current	14	Operator	9
Electricians	11	Packaging	17
Ersatzteilliste Einblashaube Monojet	39	Periodic inspection	5
Examination	5	Personal protective equipment	17
Examination by machine operator	5	Personnel	
Example		Disassembly	20
Injection hood G 5 Silomat connection	24	Power connection	22, 23
Face guard	13	Protective clothing	12
Feeding dry material to the machine	25	Protective equipment	12
Function level indicator	26	Protective gloves	13
General information	6, 22, 23	Protective goggles	12
Hazardous dusts	14, 29	Put injection hood on G 4	28
Hearing protection	12	Repair of the level indicator	27
Helmet	13	Requirements	10



Safety.....	19	Spare parts list Level indicator 42V type II	41
Safety.....	9, 17	Special risks.....	13
Safety.....	20	Sticker	15
Safety equipment.....	15	Storage	27
Safety instructions for transport.....	16	Symbols	
Safety shoes	12	in the danger zone	15
Signs.....	15	in the manual	6
Skilled personnel	10	Technical data Injection Hoods E 1	22
Sound power level	23	Technical data Injection Hoods E 1 with rocker arm	23
Spare parts	9	Technical data Injection Hoods G 5.....	22
Spare parts drawings / lists	32	Trained person.....	10
Spare parts list E 1 injection hood with rocker arm 00420664 see page 32/33	37	Transport inspection	16
Spare parts list E1 injection hood cpl. 20600213	33	Transport, packing and storage	16
Spare parts list G 5 injection hood cpl. 00044334	35	Using the level indicator.....	26
Spare parts list injection hood with rocker arm G4 00420676	37	Vibrations	23



PFT – THE FLOW OF PRODUCTIVITY



Knauf PFT GmbH & Co. KG
Postfach 60 97343 Iphofen
Einersheimer Strasse 53 97346 Iphofen
Germany

Telephone +49 9323 31 760
Telefax +49 9323 31 770
Technical Hotline +49 9323 31 1818
info@pft-iphofen.de
www.pft.eu