

Operating manual

PFT SWING L FC 230V – 400V AIRLESS

Part 2 EC Declaration of Conformity

Overview - Operation and service



Article number of the machine: 00 45 13 36 SWING L FC-230V AIRLESS

Article number of the machine: 00 53 14 53 SWING L FC-400V AIRLESS



Article number of the machine: 00 45 13 35 SWING L FC-230V AIRLESS

Article number of the machine: 00 53 13 48 SWING L FC-400V AIRLESS

Article number of the operating manual: 00 51 10 06



Read the operating manual prior to starting any work!

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Table of Contents

1 EC Declaration of Conformity	6	14.2 Connection cable 230V	15
2 Examination	7	14.3 Electrical connection 400 V	15
2.1 Examination by machine operator	7	15 Operating modes.....	15
2.2 Periodic inspection.....	7	15.1 Selector switch pump motor	15
3 General information	7	15.2 Speed controller	16
3.1 Information regarding the operating manual	7	16 Accessories	16
3.2 Keep the manual for future reference	8	17 Spare parts service	16
3.3 Division	8	18 Information service	16
4 Technical data.....	8	19 Intended use of SWING airless L.....	17
4.1 General information	8	19.1 Intended purpose of SWING airless L..	17
4.2 Connected value 400 V	8	19.2 Intended purpose of the spray gun	17
4.3 Connection value 230 V.....	9	20 Electrostatic charge.....	18
4.4 Operating conditions	9	20.1 The machine must be earthed	18
4.5 Power values of the Airless 306 pump unit	9	20.2 Ventilation.....	18
5 Dimension sheet of SWING airless L	10	21 Supply pressure	18
6 Dimension sheet of SWING airless L with a bag squeezer	10	21.1 Supply pressure of the machine.....	18
7 EMC test	11	21.2 Recoil of spray gun.....	18
8 Sound power level	11	22 Safety rules	19
9 Vibrations	11	23 Description of SWING airless L	19
10 Name plate	11	23.1 Functioning principle of SWING airless L	19
11 Quality Control sticker	11	24 Material:	19
12 Assembly of SWING airless L	12	24.1 Flowability / Flow characteristics	19
12.1 Overview	12	25 Transport, packing and storage	20
13 Assembly units	13	25.1 Safety instructions for transport	20
13.1 Airless 306 pump unit	13	25.2 Transport inspection	20
13.2 Control cabinet article number 00451361	13	25.3 Transport	21
13.3 Control cabinet 400 V Item number 00531099	14	25.4 Transport with passenger car	21
14 Connections	14	26 Packaging	22
14.1 Mortar hose connection	14	27 Preparing the working place	22
		27.1 Danger of death from electric current!..	22
		28 Operation	23
		28.1 Safety	23

Table of Contents



29 EMERGENCY-STOP button	24	41.2 Moving the safety lever.....	37
30 Preparing the machine	24	41.3 Pressing the trigger.....	38
31 Connecting the power supply 230V	25	42 Setting the spray pattern	38
32 Connecting the power supply 400 V	26	42.1 Spray pattern	38
33 High-pressure hose	26	42.2 Spraying the material.....	38
33.1 Connecting the high-pressure hose	26	42.3 Interruption of work	39
33.2 Tips from practical experience	27	43 Stopping in case of emergency /	
33.3 Storage and shelf life	28	EMERGENCY-STOP button	39
33.4 Rinse the rotor / stator before use	29	43.1 EMERGENCY-STOP button	39
33.5 Connecting a spray gun	29	44 Action in case of power cut.....	40
33.6 Inserting the reverse nozzle in the		44.1 Turn the selector switch of the pump	
nozzle protector	30	motor to position "0".....	40
34 Filling the material container with		45.1 Restarting after a power failure	41
material	30	46 Work on troubleshooting.....	41
34.1 Pre-lubricating the pump.....	30	46.1 Reaction in the event of faults	41
35 Working with the bag squeezer.....	31	46.2 Fault displays.....	42
35.1 Assembling the bag squeezer.....	31	46.3 Faults	42
36 Protective equipment	32	46.4 Safety.....	42
36.1 Risk due to material spraying.....	32	46.5 Table of faults	43
37 Monitoring the machine	32	46.6 Signs for blocked hoses:	44
38 Switching on SWING airless L.....	33	46.7 Causes for this could be:	44
38.1 Main switch	33	46.8 Earlier damage to the high-pressure	
38.2 Securing the spray gun	33	hose	44
38.3 Switching on the display	33	47 Removal of clogging in hoses	45
38.4 Setting the cut-off pressure (Pstop)	33	47.1 Removal of clogging in the spray	
38.5 Setting the switch-on pressure		nozzle	45
(Pstart)	34	47.2 Change the direction of rotation of the	
39 Display function with dry run protection ...	34	47.3 Turn the nozzle handle 180°.....	46
39.1 Functional description	34	47.4 The clogged spray nozzle is not	
39.2 Settings view	34	cleared	46
39.3 Activate / deactivate	35	47.5 Cleaning the spray nozzle during daily	
39.4 Setting parameters.....	35	usage	47
39.5 Monitoring activation	35	47.6 Switch machine back on after	
40 Risk of fire and explosion	36	blockage has been cleared	47
41 Putting the machine into operation	37	48 End of work / clean machine	47
41.1 Selector switch pump motor.....	37	48.1 Emptying the material container	47
		48.2 Pressure-free system/pressure	
		release	48
		48.3 Removing the spray nozzle	48



Table of Contents

49 Filter element of SWING airless L	49	52.2 Remove connection cable	53
49.1 Cleaning the filter element	49	52.3 Environmental protection	53
49.2 After cleaning	49	52.4 Maintenance plan	53
50 Replacing the pump	49	52.5 Lubricate the sealing unit	54
50.1 Secure against restarting	49	52.6 Actions after completed maintenance ..	54
50.2 Change pump	50	53 Disassembly	55
50.3 Warm surfaces of the pump unit	50	53.1 Safety	55
50.4 Remove filter element	50	53.2 Disassembly	56
50.5 Damaged pump unit	51	54 Disposal	56
51 Switching off SWING airless L	52	55 Index	57
52 Maintenance	52		
52.1 Safety	52		

EC Declaration of Conformity



1 EC Declaration of Conformity

Company: Knauf PFT GmbH & Co. KG
Einersheimer Straße 53
97346 Iphofen
Germany

declares under our sole responsibility that the product:

Type of machine: SWING airless
Type of equipment: Feed pump
Serial number:
Guaranteed sound power level: 78 dB

is in conformity with the following CE directives:

- Outdoor Directive (2000/14/EC),
- Machinery Directive (2006/42/EC),
- Electromagnetic Compatibility Directive (2014/30/EU).

Operative Conformity Assessment according to Outdoor Directive 2000/14/EC:

Internal production control as per article 14 paragraph 2 in connection with annex V.

This declaration only refers to the machine in the state in which it has been placed on the market. Parts subsequently added by the user and/or subsequent interventions are not covered. This declaration ceases to be valid if the product is converted or changed without consent.

Person authorised to compile the relevant technical documentation:

Dipl.-Wirtsch.-Ing. (FH) Michael Duelli, Einersheimer Straße 53, 97346 Iphofen.

The technical documentation is available from:

Knauf PFT GmbH & Co.KG, Technical Department, Einersheimer Straße 53, 97346 Iphofen.

Iphofen,

Place, date of issue

Name and signature

Dr. York Falkenberg

Managing director
Details of signatory



2 Examination

2.1 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 the machine 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 machine has to be stopped to eliminate the defects.

2.2 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.

3 General information

3.1 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.

Technical data**3.2 Keep the manual for future reference**

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

3.3 Division

The operating manual is divided into 2 books:

- Part 1 Safety

General safety instructions mixing pumps/feed pumps

Article number: 00 17 27 09

- Part 2 Overview, operation and service (this manual).

For safe operation of the device both parts have to be read and observed. Together they form one operating manual.

4 Technical data**4.1 General information**

Detail	Value	Unit
Weight Art. No. 00 45 13 36 / 00 53 14 53	102	kg
Weight Art. No. 00 45 13 35 / 00 53 13 48	112	kg
Length	1430	mm
Width	500	mm
Height / with a bag squeezer	720 / 972	mm

Material container

Detail	Value	Unit
Filling height	720	mm
Hopper volume	70	ltr

4.2 Connected value 400 V**Electrical details**

Detail	Value	Unit
Voltage, alternating current 50 Hz	400	V
Power consumption, max.	8.2	A
Power consumption, maximum 50 Hz	4	kW
Fuse protection	Min. 16	A
Drive pump motor, 50 Hz	4	kW
Speed at 50 Hz	208	rpm



Technical data

4.3 Connection value 230 V

Electrical details	Detail	Value	Unit
	Voltage, alternating current 50 Hz	230	V
	Power consumption, max.	16	A
	Power input, maximum 50 Hz	3	kW
	Fuse protection	At least 16	A
	Drive pump motor, 50 Hz	3	kW
	Speed at 50 Hz	214	rpm
	Power consumption of pump motor 50 Hz	11.4	A

4.4 Operating conditions

Environment	Detail	Value	Unit
	Temperature range	5-45	°C
	Relative humidity, max.	80	%

Duration	Detail	Value	Unit
	Max. operating time at a stretch	8	hours

4.5 Power values of the Airless 306 pump unit

Pump capacity of Airless 306	Detail	Value	Unit
	Pump capacity	0 – 6.5	l/min
	Operating pressure, max.	135	bar
	Grain size max.	0	mm
	Feed range *, maximum at DN12	20	m

* reference value depending on conveying height, pump condition and version, mortar quality, composition and consistency

Dimension sheet of SWING airless L



5 Dimension sheet of SWING airless L

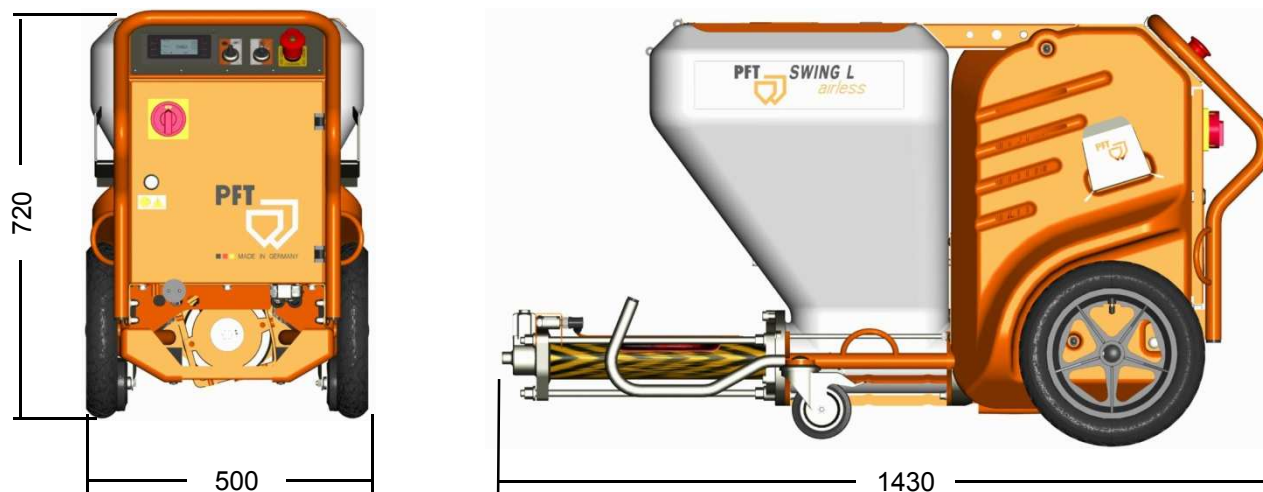


Fig. 1: Dimension sheet

6 Dimension sheet of SWING airless L with a bag squeezer

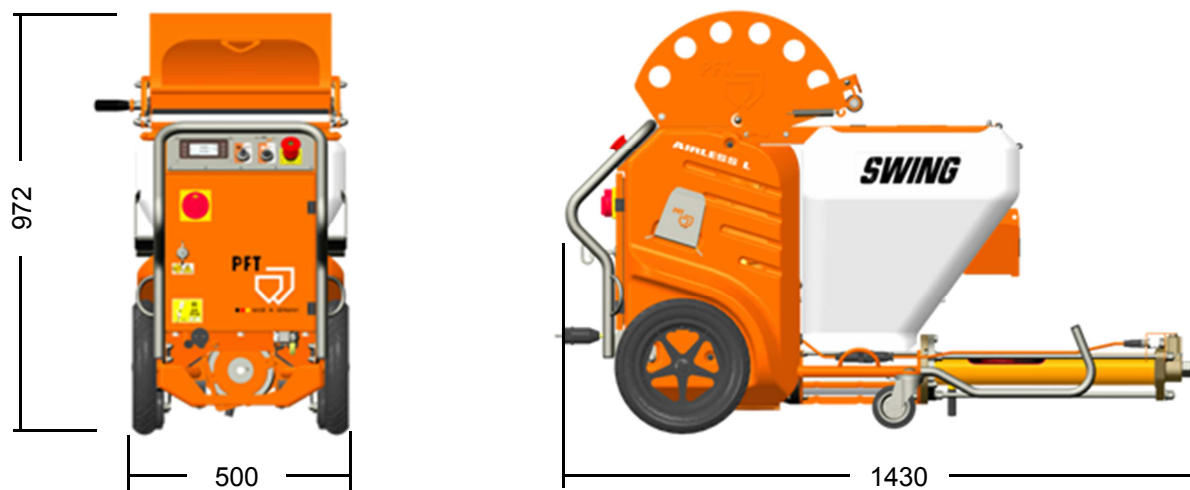


Fig. 2: Dimension sheet



7 EMC test

The machine has been subjected to an EMC test, and it fulfils the stringent requirements specified by the EMC directive (filter class B).

The control cabinet is equipped with a network filter.

8 Sound power level

Guaranteed sound power level LWA

78 dB (A)

9 Vibrations

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

10 Name plate

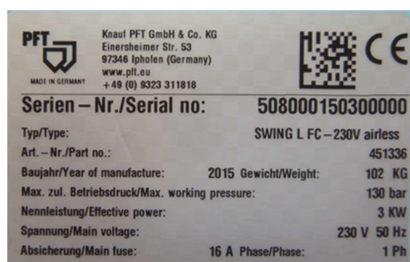


Fig. 3: Name plate

The type plate is located in the control cabinet and includes the following information:

- Manufacturer
- Type
- Year of manufacture
- Machine number
- Permissible operating pressure

11 Quality Control sticker



Fig. 4: Quality Control sticker

The following details can be found on the Quality Control sticker:

- CE confirmed as per EU directives
- Serial no / serial number
- Controller / signature
- Date of control

Assembly of SWING airless L



12 Assembly of SWING airless L

12.1 Overview

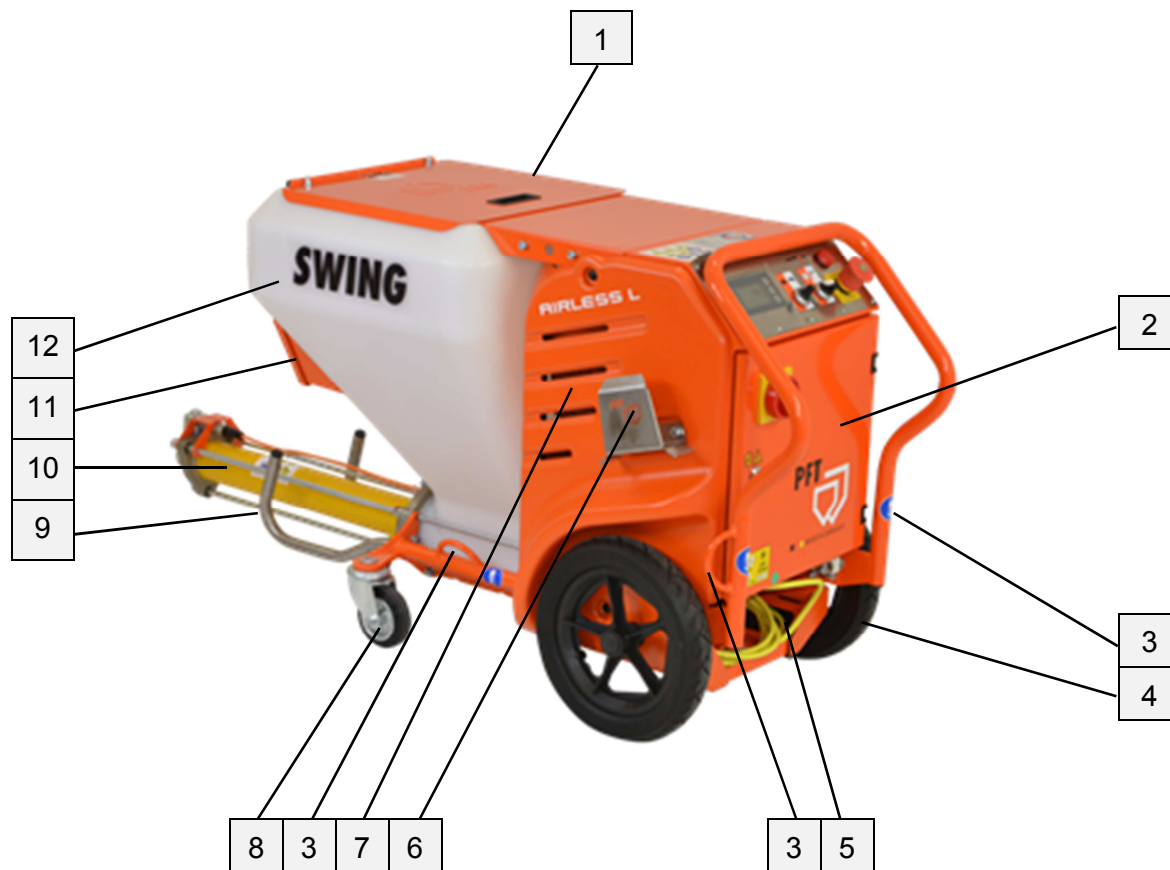


Fig. 5: Table of the assembly groups

- | | |
|-------------------------------------|--------------------------------|
| 1. Material container cover | 7. Side panel |
| 2. Control cabinet | 8. Castor |
| 3. Crane eyelet | 9. Carrying or sliding handle |
| 4. Puncture-proof tyre | 10. Airless 306 pump unit |
| 5. Connection cable with plug 230 V | 11. Tool kit |
| 6. Mortar hose bracket | 12. Plastic material container |

13 Assembly units

13.1 Airless 306 pump unit

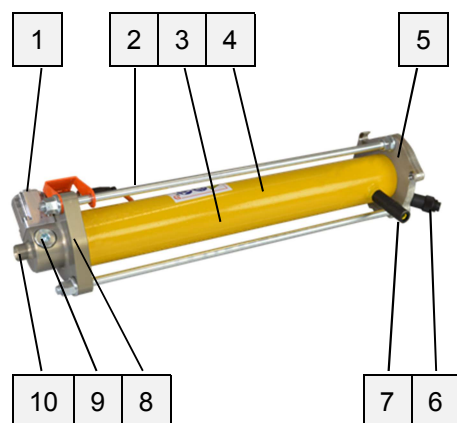
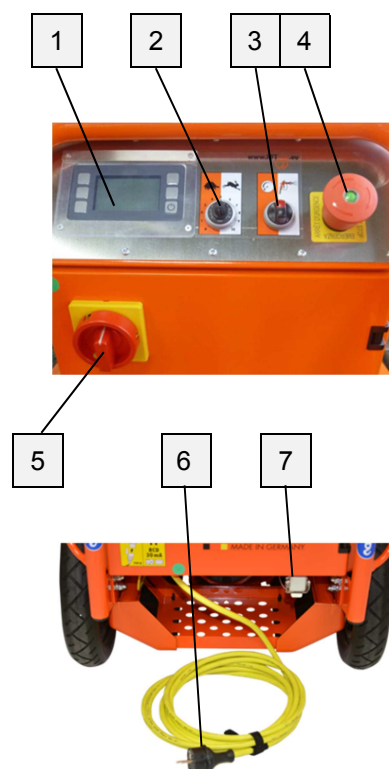


Fig. 6: Pump unit assembly

- Airless 306 pump unit with a pressure reducer
- 1. Upper part of the housing with a pressure reducer
- 2. Tie rod M12
- 3. Stator of airless 306
- 4. Rotor of airless 306
- 5. Suction flange
- 6. Connection cable of pressure reducer
- 7. Anti-twist protection
- 8. Pressure reducer airless 306
- 9. Locking screw for the filter element
- 10. Connection for pressure hose

13.2 Control cabinet article number 00451361



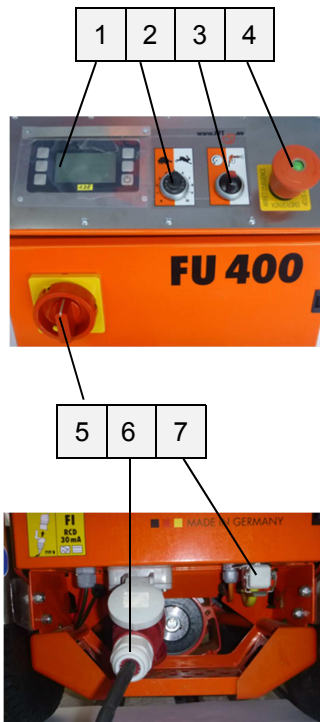
- Control cabinet of SWING airless 230V:
- 1. Display
- 2. Potentiometer for motor speed, material quantity
- 3. Selector switch for the direction of rotation of the pump with a pilot lamp
- 4. EMERGENCY-STOP button
- 5. Main switch
- 6. Connection cable with plug 230 V
- 7. Dummy connector for remote-controlled power socket

Fig. 7: Assembly unit control cabinet

Connections



13.3 Control cabinet 400 V Item number 00531099



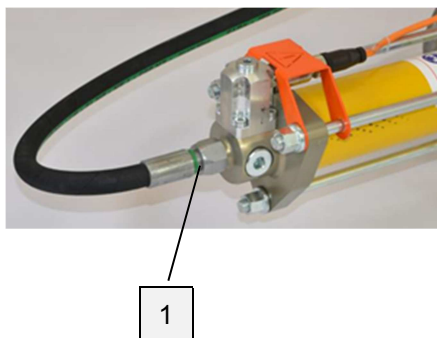
■ Control cabinet SWING L FC 400V AIRLESS:

1. Display
2. Potentiometer for engine speed, material quantity
3. Selector switch direction of rotation, pump motor with control lamp
4. EMERGENCY STOP switch
5. Main switch
6. 400 V connection
7. Dummy connector for remote-controlled power socket

Fig. 8: Assembly unit control cabinet

14 Connections

14.1 Mortar hose connection

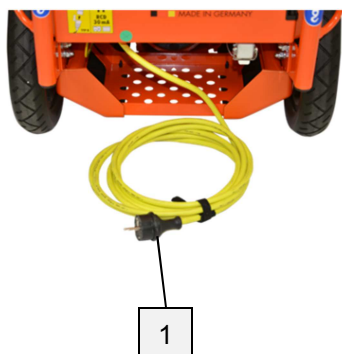


1. Hose connection DN12

Fig. 9: Hose connection



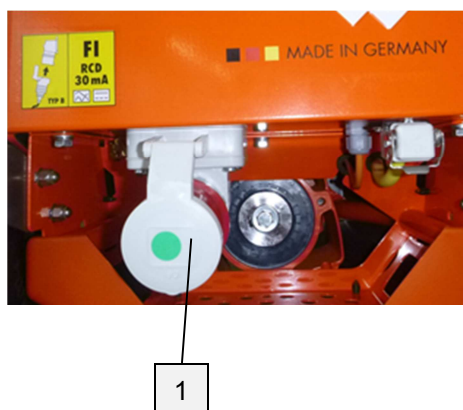
14.2 Connection cable 230V



1. Connection cable with plug 230 V

Fig. 10: Power connection

14.3 Electrical connection 400 V



1. Electrical connection 400 V

Fig. 11: Electrical connection 400 V

15 Operating modes

15.1 Selector switch pump motor



Fig. 12: Operating mode of the pump motor

The pump motor can be operated in three different operating modes:

Selector switch at the middle position:

The machine is switched off.

Selector switch right:

If the main switch and the ON/OFF button are activated on the display, the machine is ready for operation.

Selector switch left:

The pump motor runs backwards, thus the pump is relaxed (pressure reduction).

Accessories



15.2 Speed controller



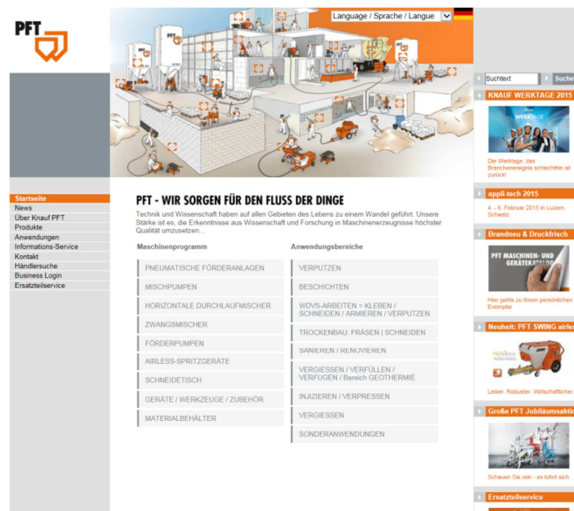
The potentiometer is used to define the motor speed and the material quantity.

- Low speed → less material.
- High speed → more material.

Fig. 13: Speed controller operating mode

16 Accessories

For the recommended accessories/equipment, see the PFT machine and device catalogue or visit www.pft.eu



17 Spare parts service

Spare parts service under www.pft.eu

The serial number of the machine is required to download the spare parts lists.

18 Information service

Information service
Application reports
Newsletter
Brochures
Technical documentation
Videos Animations
Imprint
Privacy
General Terms and Conditions
Purchasing terms
Contact PFT worldwide
Business Login
Spare parts service

- Inspection suggestions for annual expert inspection can be downloaded.



19 Intended use of SWING airless L

19.1 Intended purpose of SWING airless L

The tool is conceptualised and designed exclusively for the purpose of use specified here.

**Attention!**

The SWING airless L sprays virtually all grain-free and pasty materials. 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.

The SWING airless L is to be used only in technically perfect condition as well as for its intended use and while taking into account the safety and hazard information in the operating instructions.

Particularly malfunctions that may compromise safety have to be eliminated immediately prior to putting the SWING airless L back into operation.

19.2 Intended purpose of the spray gun

**Danger!****Combustible coating materials!**

The spray gun may not be used to spray combustible materials.

**Danger!****Explosion protection!**

Do not use the device in areas that come under the explosion protection ordinance.

**Danger!****Risk of explosion and fire while spraying due to ignition sources.**

No ignition sources may be present in the surroundings, e.g. open fire, smoke from cigarettes, cigars and tobacco pipes, sparks, glowing wires, hot surfaces, etc.

Electrostatic charge



20 Electrostatic charge

20.1 The machine must be earthed



Danger!

Electrostatic charge!

Owing to the flow velocity of the coating material when spraying, electrostatic charges may sometimes develop on the device. These may attract sparks or result in flames when discharging. So, ensure that the device is always earthed via the electrical installation. The connection must be established using a protective contact socket that is earthed as per the regulations.

20.2 Ventilation



NOTE!

Ensure adequate natural or artificial ventilation to avoid health hazards and the risk of fire and explosion.

21 Supply pressure

21.1 Supply pressure of the machine



Caution!

The mortar pressure of the pump is shown on the display.

21.2 Recoil of spray gun



Danger!

At high operating pressure, pulling the trigger results in a recoil force.

In order to avoid injuries, the user must be ready to push away his/her hand or lose his/her balance.

A continuous load through this recoil may damage health permanently.

**NOTE!**

The permissible operating pressure for the spray gun, spray gun accessories and the high-pressure hose may not be above the operating pressure specified below the device.

22 Safety rules

**Caution!**

Observe the regional safety rules for mortar conveyors and mortar guns!

23 Description of SWING airless L

23.1 Functioning principle of SWING airless L



Fig. 14: Description

The feed pump of SWING airless L is a high-pressure pump and can be used for operating pressures of up to 135 bar. The operating pressure of the machine depends on the quality of the material and the nozzle to be used.

It is used to apply coats, i.e. primarily spraying compound on indoor walls.

- Pour the finished product into the material container.
- Use a spray gun to spray the material onto a wall at high pressure.

24 Material:

24.1 Flowability / Flow characteristics

**NOTE!**

- The Airless 306 pump unit can be operated at a pressure of up to 135 bar.
- In order to avoid machine faults and increased wear of the pump motor, pump shaft and the pump itself, only original PFT spare parts such as
 - PFT rotors
 - PFT stators
 - PFT pump shaft
- PFT conveying hoses must be used.
- These are compatible with each other and form a constructive unit with the machine.
- Non-compliance does not only cause loss of guarantee, but also bad mortar quality is to be expected.

25 Transport, packing and storage

25.1 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.

Suspended loads



WARNING!

Danger to life from suspended loads!

When lifting heavy loads there is danger to life from falling parts or uncontrolled swinging parts.

Therefore:

- Never step under suspended loads.
- Observe the instructions regarding the provided anchorage points.
- Do not fix to projecting machine parts or eyelets of attached components.
- Ensure safe fitting of the sling gear.
- Use only approved lifting gear and sling gear with sufficient lifting capacity.

25.2 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.



Transport, packing and storage



NOTE!

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

25.3 Transport

Anchor points



Fig.15: Anchor points

Anchor the machine at the marked anchor points (1) for transport by crane.

Observe the following conditions:

- The crane and lifting equipment have to be designed for the weight of the packages.
- The operator has to be authorised to operate the crane.

Attachment:

1. Anchor the hooks at the anchor points.
2. Ensure that the package is straight, possibly observe eccentric centre of gravity.



DANGER!

Risk of injury due to not latching the push button!

Make sure that the push button is correctly latched in the slider handle when transporting the machine.

25.4 Transport with passenger car

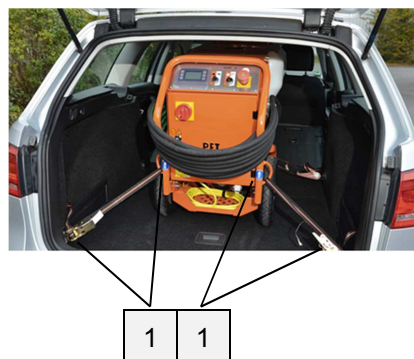


Fig. 16: Transport

1. Remove loose parts.
2. Lock the castors of the machine.
3. Secure the machine at the marked holding points (1).



DANGER!

Danger of injury by unsecured loads!

In case of road transport, all persons involved in the loading process are responsible for the proper securing of the load. The responsible driver is responsible for the operational loading.

26 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.

27 Preparing the working place

27.1 Danger of death from electric current!



DANGER!

Cover the sockets and switches without fail.

Danger of an electrical shock due to the seepage of spraying material.



ATTENTION!

Cover or remove all surfaces and objects that are not to be sprayed.

**NOTE!**

Do not use highly sticky adhesive on wall papers and painted base surfaces in order to prevent damage when removing. Remove adhesive tapes slowly and uniformly. Let the surfaces remain glued only as long as absolutely necessary in order to minimise possible residue when removing.

28 Operation

28.1 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 one another or lying about pose potential accident risks.
- Increased noise level may cause permanent hearing deficiencies. At close range of the machine 78 dB(A) can be exceeded due to operational conditions. Close range is a distance of less than 5 metres to the machine.

EMERGENCY-STOP button**29 EMERGENCY-STOP button**

Fig. 17: EMERGENCY-STOP button

The emergency-stop button helps in quickly switching the machine to a safe status in the event of a hazard or to avert a hazard.

Function:

The EMERGENCY-STOP button must lock when actuated and can be reset to its original position by turning the EMERGENCY-STOP button.

30 Preparing the machine

Prior to operating the machine carry out the following steps for preparing the machine:



Fig. 18: Protective grille

**DANGER!**
Rotating pump shaft!

Risk of injury when reaching into the rotating pump shaft.

- The grille cover (1) in the material container must not be removed during machine preparation and operation or for cleaning purposes.
- Never reach into the running machine.

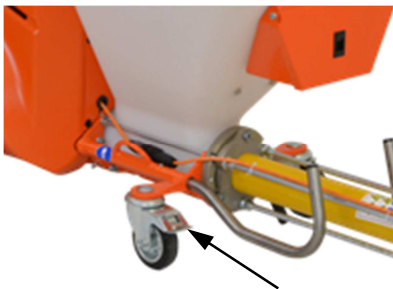


Fig. 19: Lockable castor

1. Lock the lockable castor prior to operating the machine.
2. Put up the machine on a stable, even surface and secure against unwanted movements:
 - Neither tilt nor roll off the machine.
 - Put up the machine in such a way that it cannot be hit by falling objects.
 - The operating elements have to be freely accessible.
 - Maintain a clearance of approx. 1.5 metres around the machine.



Connecting the power supply 230V



DANGER!

When working in rooms:

Solvent-containing vapours must not form in the area of the device. Place the device on the side opposite that of the spray object. Maintain a minimum distance of 5 metres between the device and the spray gun.

When working outdoors:

Solvent-containing vapours must not be driven towards the device. Pay attention to the wind direction. Place the device such that solvent-containing vapours do not reach the device and become deposited there. Maintain a minimum distance of 5 metres between the device and the spray gun.

31 Connecting the power supply 230V



Fig. 20: Connection cable

1. Take the connection cable from the machine.

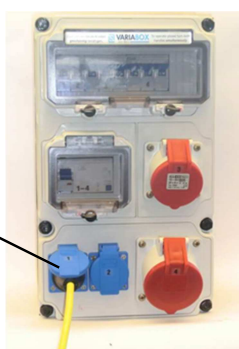
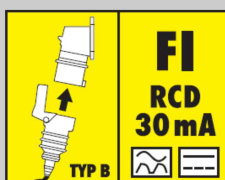


Fig. 21: Power supply 230V

2. Connect the machine only to a current distributor that complies with regulations.



DANGER!

Danger of death from electric current!

The connection line has to be fused properly:

Connect the machine only to a power source with permissible 30 mA FI protection switch RCD (residual current operated device) of type "B" that is sensitive to all currents that are required for the operation of frequency converters.



WARNING!

Danger to life from rotating parts!

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

- The motor must be operated only with the control cabinet of the machine.

Connecting the power supply 400 V

32 Connecting the power supply 400 V

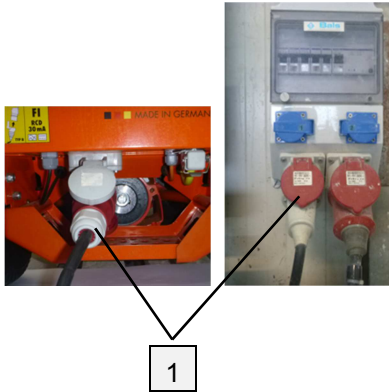
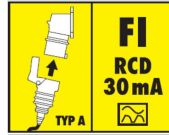


Fig. 22: Power supply 400 V

1. Connect machine (1) to three-phase network 400 V.



DANGER!

Danger of death from electric current!

The connection line has to be fused properly:

Connect the machine only to a power source with permissible RCCB (30 mA) RCD (residual current operated device) type A.



WARNING!

Danger to life from rotating parts!

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

- The motor must be operated only with the control cabinet of the machine.

33 High-pressure hose

33.1 Connecting the high-pressure hose



WARNING!

Adhere to the listed safety instructions to ensure the functional capability of hose lines and to ensure that their service life is not reduced due to additional loads.



DANGER!

Risk of injury death to injection:

Leakages may develop in the high-pressure hose due to wear, bending and unintended usage. Through a leakage, fluid can be injected into the skin.

Safety instructions for handling the hose lines correctly

- Never use damaged hose lines. Damage may include worn upper surface of the hose, exposed material linings or bends.
- Use only the hose connections and pressure connections that are approved for high-pressure operations in the permissible pressure range and that match each other as far as their functioning principle is concerned.
- During operation, hose lines may not be exposed to pulling, torsion and buckling forces due to external effects. The smallest specified bending radius of the hose must not be undershot.



Safety instructions for handling the hose lines correctly

- Protect the hose lines against damage caused by external mechanical, thermal and chemical effects.
- Do not use the hose lines which are marked with a lower operating pressure than that specified on the machine.
- Lay and secure the hose lines such that hazards are avoided if a hose line fails.
- Hose lines are wearing parts that have a limited service life. Therefore, replace the hose lines at reasonable intervals depending on the operating conditions, even if safety-relevant defects are not noticed.
- Release the pressure of hose lines after operation. Loosen, clean, drain, wind and store them properly.
- Store the hose lines in a cool and dry location with low dust levels and ensure that they are not bent or exposed to tension.

33.2 Tips from practical experience



Fig. 23: Do not snap off the hose, adhere to the bending radius > 500 mm

- Avoid loop formation during operation.
- Do not use the high-pressure hose as a pull rope.
- Do not snap off the high-pressure hose (1) or pull it over sharp edges.
- Do not run over the high-pressure hose.
- Replace the high-pressure hose if the upper surface of the hose is damaged or if the pressure carrier is defective.
- Do not connect high-pressure hoses using incorrect connectors or connectors that do not match. Ensure that the hose and the fitting are functionally coordinated with each other.
- Ensure that the hose lines do not come into contact with materials that may cause damage.
- Replace the high-pressure hoses at reasonable intervals, even if safety-relevant defects are not noticed.
- Clean and maintain the hose lines and fittings after every use.
- Do not tighten the hose fittings forcefully in order to rectify leakages.
- Do not insert the high-pressure hoses in solvents.
- Wipe off the outer side only using a cloth soaked in water.
- Lay the high-pressure hoses such that there is no risk of tripping over them.

33.3 Storage and shelf life

- Even if hoses and hose lines are stored properly and exposed to permissible stresses, they undergo a natural ageing process. Therefore, their shelf life is limited.
- Improper storage, mechanical damage and impermissible stresses are the most common causes of failure.
- Deviating from the following reference values, the shelf life can be determined in each case depending on the empirical values. The shelf life of a hose line, including possible storage time, should not exceed 5 years. The storage time should not exceed two years.

Replace the hose lines if the following criteria are met:

- Damage to the outer layer up to the lining (e.g. chafe marks, cuts, cracks).
- Embrittlement of the outer layer (crack formation on the hose material).
- Deformations which do not correspond to the natural form of the hose or the hose line in the de-pressurised and pressurised states or when bent, e.g. layer separation, bubble formation.
- Leakage points.
- Detachment of the hose from the fitting.
- Corrosion of fitting that reduces the functionality and strength.
- Overshot storage time and/or shelf life of the hose or the hose line.
- If the specifications regarding storage time and shelf life are not provided to the user, the reference values as per DIN 7716 are recommended



High-pressure hose

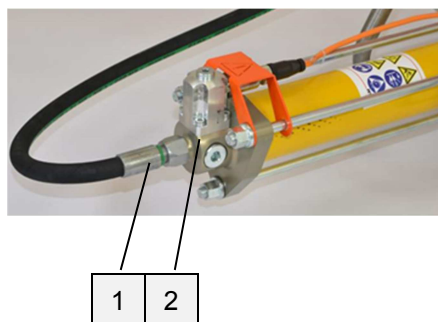


Fig. 24: Connecting the pressure hose

1. Connect the pressure hose (1) to the pressure reducer (2).



NOTE!

Ensure clean and correct connection and tightness of the screwed connection.



DANGER!

Risk of injury death to injection:

Liquid under pressure may escape from leaky screwed connections and cause severe injuries.

33.4 Rinse the rotor / stator before use



Caution!

The rotor / stator must be thoroughly rinsed with water generally before airless processing of colour. Slight traces of rust can develop on the rotor head depending on the material.

In order to avoid discolouration on the wall, the rotor / stator system must be rinsed with water before processing till there are no traces of rust.

PFT is not responsible for discolouration on the wall. Always conduct a splash test in advance.

33.5 Connecting a spray gun

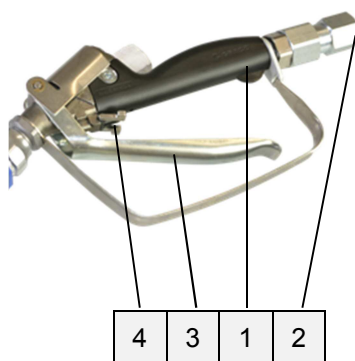


Fig. 25: Connecting a spray gun

1. Connect the spray gun (1) to the high-pressure hose (2).
2. Ensure that the trigger (3) of the spray gun is secured using the safety lever (4).



NOTE!

Ensure clean and correct connection and tightness of the screwed connection.



DANGER!

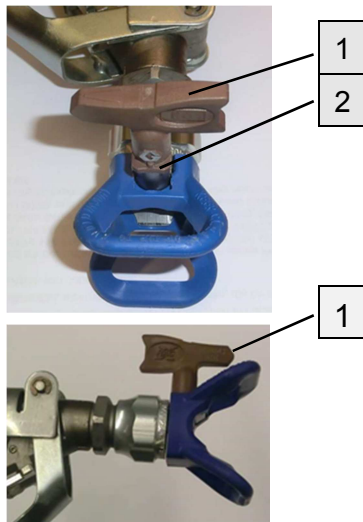
Risk of injury death to injection:

Liquid under pressure may escape from leaky screwed connections and cause severe injuries.

Filling the material container with material



33.6 Inserting the reverse nozzle in the nozzle protector



1. Insert the nozzle (1) into the nozzle protector from top (pay attention to the marking (2)).
2. Turn the top of the nozzle (1) towards front.
3. The material is sprayed in this position.



NOTE!

Openings in the nozzle protector prevent material deposits from forming around the nozzle protector during the spraying process. If these openings are damaged by sharp edges, it leads to material deposits.

Never suspend the gun at the nozzle protector.

Fig. 26: Inserting a nozzle

34 Filling the material container with material

34.1 Pre-lubricating the pump



NOTE!

The pump must be pre-lubricated before filling the material in the material container for the first time.

- Pour approximately one litre of water mixed with silicon oil emulsion in the material container.



Fig. 27: Stirring the material

1. Before pouring into the material container, stir the material properly using an agitator.



Working with the bag squeezer



Fig. 28: Filling the material container

2. Pour the stirred material into the material container.

35 Working with the bag squeezer

35.1 Assembling the bag squeezer

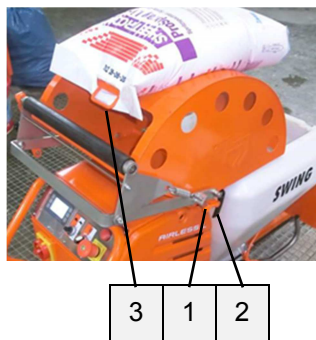


Fig. 29: Bag squeezer

Assemble the bag squeezer on SWING airless L:

1. Fix the bag squeezer on both sides using the turning lock (1) and the clamping handle (2).
2. Suspend the material sack with the loop on the clamp (3) of the bag squeezer.

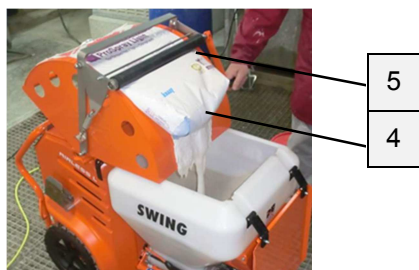


Fig. 30: Emptying the material sack

3. Cut the material sack (4) and squeeze the material from the sack using the roller (5).



DANGER!

Risk of contusion at the bag squeezer!

There is a risk of contusion when actuating the bag squeezer.

- Do not grab in the dispenser section of the roller.

36 Protective equipment

36.1 Risk due to material spraying



Fig. 31: Protective equipment



Warning!

Spraying material that discharges from the sprayer of the gun, leaks or cracked components may penetrate into the body and cause extremely serious injuries.

Material sprayed in the eyes or onto the skin can also cause severe health hazards.

1. Material that enters the skin can appear similar to a normal cut, but it is a severe injury.
2. Do not place hands or fingers over the spraying nozzle.
3. Do not seal or divert the material escaping from leakage points using hands, body, gloves or cloths.
4. Always use the nozzle protector and trigger catch when spraying with the gun.
5. Before each operation, ensure that the trigger catch of the gun is functioning properly.
6. Always disengage the trigger catch of the gun when it is not used for spraying.
7. Check the hoses and coupling every day; replace worn or damaged parts immediately.
8. Keep children and animals away from the working area.
9. Do not direct the gun towards people or animals or spray on them.

37 Monitoring the machine



DANGER!

Access by unauthorised persons!

The machine must be operated only if monitored.



38 Switching on SWING airless L

38.1 Main switch

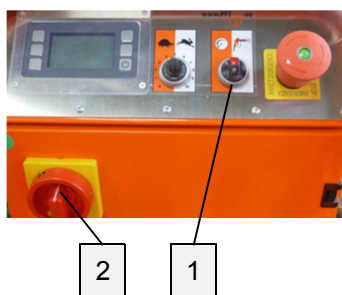


Fig. 32: Main switch

1. Turn the selector switch (1) of the pump motor to the middle position.
2. Turn the main switch (2) clockwise.

38.2 Securing the spray gun

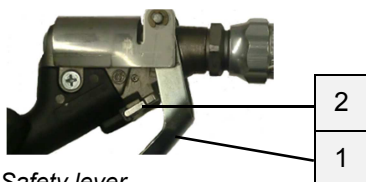


Fig. 33: Safety lever

1. Ensure that the trigger (1) of the spray gun is secured using the safety lever (2).

38.3 Switching on the display

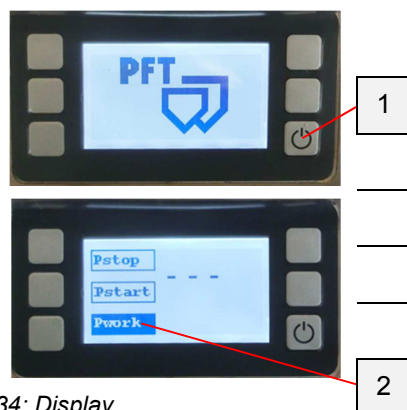


Fig. 34: Display

1. Press the button (1) on the display for approximately 3 seconds.
2. Pwork (with a blue background) lights up on the display (2) after a short switchover phase.
3. The pressure at the pressure flange is displayed here during the operation.

38.4 Setting the cut-off pressure (Pstop)



Fig. 35: Cut-off pressure (Pstop)

When the set maximum pressure is reached, the pressure controller switches off the machine:

1. Press the button (1) (Pstop = cut-off pressure).
2. Press the button (2) to increase the cut-off pressure.
3. Press the button (3) to reduce the cut-off pressure.

Display function with dry run protection

38.5 Setting the switch-on pressure (Pstart)

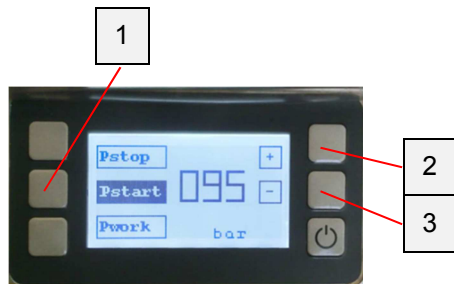


Fig. 36: Switch-on pressure (Pstart)

When the pressure reduces to a set switch-on pressure, the pressure controller switches on the machine again.

1. Press the button (1) (Pstart = switch-on pressure).
2. Press the button (2) to increase the switch-on pressure.
3. Press the button (3) to reduce the switch-on pressure.



NOTE!

There is no accurate reference value between cut-off and switch-on pressures.

The difference between both these pressures depends on the material and the nozzle to be used.

39 Display function with dry run protection

39.1 Functional description

The dry run protection feature was added to the machine:

This prevents the rotor-stator system from running idle and thus overheating.

This functionality was saved in the display and directly depends on the start pressure.

Example:

Machine setting

Pstart	85 bar
PStop	120 bar
Pwork	e.g. 75 bar dropping (lack of material)

If the starting pressure value (85 bar –X) is not reached owing to lack of material, the machine switches to the Standby mode for protection after lapse of time. This time interval is factory-set (time / pressure difference), but can also be adjusted or permanently deactivated (not advisable) by the customer.

39.2 Settings view

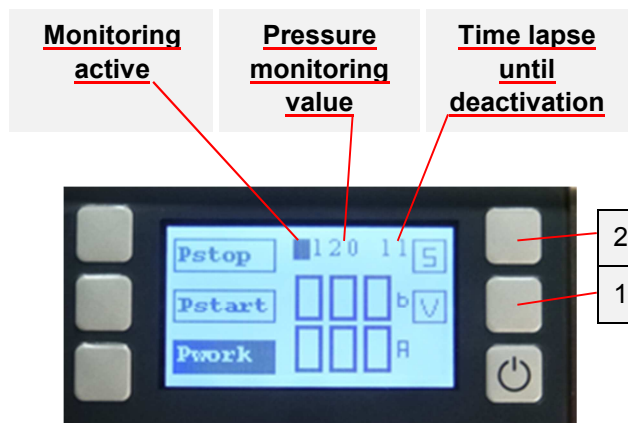


Fig. 37: Settings view

1. The V-button (1) can be used to activate or deactivate the monitoring (refer to point 36.3).
2. The S-button (2) can be used to set the monitoring parameters (refer to point 36.4).

S = Select

V = View

■ = Monitoring "ON"

■ = -----Monitoring "OFF"



Display function with dry run protection

39.3 Activate / deactivate

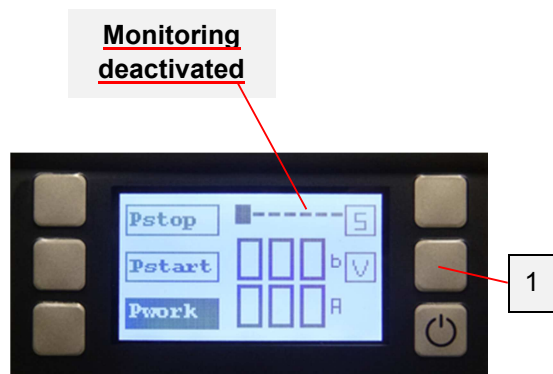


Fig. 38: Activate / deactivate

1. By briefly pressing the V-button (1) once, the monitoring is deactivated for 3 minutes and switches on again after a reactivation time.
2. On pressing the button longer, it is permanently deactivated.
3. The monitoring is always activated after switching on the system.

S = Select

V = View

■ = Monitoring "ON"

■ = -----Monitoring "OFF"

39.4 Setting parameters

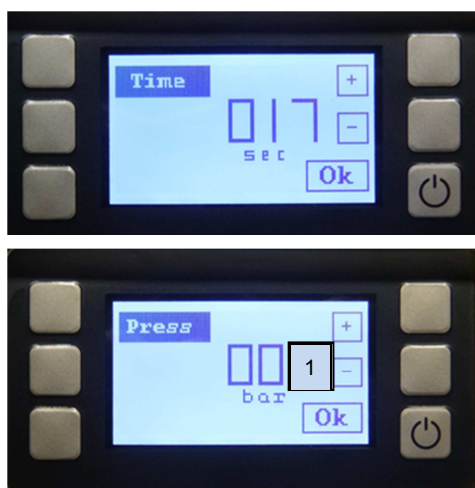


Fig. 39: Setting parameters

1. This time lapse is activated if the starting pressure + difference from the "Press" setting is not reached.
2. Is displayed above on the display (refer to point 36.2).

3. Difference with respect to the starting pressure.

4. E.g. starting pressure 95 bar

5. Monitoring / time starts only if 94 bar is undershot.

The time setting can be used to specify until when the machine should respond to the change (max. 60 sec).

The Press button can be used to specify as to when the monitoring should take place depending on the starting pressure.

39.5 Monitoring activation



Fig. 40: Monitoring activation

1. Once the "monitoring" is complete, the display shows a flashing rectangle. This indicates that the machine has been deactivated due to the "monitoring".

S = Select

V = View

■ = Monitoring "ON"

■ = -----Monitoring "OFF"

40 Risk of fire and explosion

**WARNING!****Danger to life due to the risk of fire and explosion**

Inflammable vapours in the working area, e.g. solvent and paint vapours, can explode or ignite.

The risk of fire and explosion is reduced as follows:



- Do not spray inflammable or combustible materials near naked flames or ignition sources such as cigarettes, motors and electrical systems.
- Material flowing through the device can form static charges. Static charges in the presence of paint or solvent vapours pose a risk of fire or explosion. Ensure that all parts of the spraying device including the pump, the hose unit, the spray gun and the objects in and around the spraying area are earthed in order to avoid static discharges and spark formations.
- Connect the device only to an earthed socket and use only earthed extension cables.
- Do not use adapters.
- Never spray the material onto the machine.
- Ensure that the spraying area is always properly ventilated and supplied with adequate fresh air.



Putting the machine into operation



- Do not smoke in the spraying area.
- Do not actuate or use light switches, motors or similar spark-generating products in the spraying area.
- Ensure that the area is kept clean and does not contain paint or solvent containers, materials or other inflammable materials.
- Ensure that a ready-to-use fire extinguisher is always available.
- Get information about the ingredients of materials.
- Adhere to the material safety data sheets provided by the manufacturers of the materials used.

41 Putting the machine into operation

41.1 Selector switch pump motor



DANGER!
Risk of injury from discharged mortar!

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

- Never look into the spraying device.
- Never work without protective equipment.



Fig. 41: Selector switch pump motor

1. Check whether the EMERGENCY-STOP button (1) is pressed.
2. Turn the potentiometer (2) to lever 3.
3. Turn the selector switch of the pump motor (3) clockwise.

41.2 Moving the safety lever



Fig. 42: Safety lever

1. Move the safety lever (1) of the spray gun to the back.
2. The trigger (2) of the spray gun is unlocked.

Setting the spray pattern

41.3 Pressing the trigger



Fig. 43: Trigger

1. Hold the spray gun firmly in your hand and direct it in a cleaning bucket.
2. Press the trigger (1) until the material comes out.
3. Release the trigger (1).



Fig. 44: Trigger

4. Direct the spray gun towards the material container of the machine and press the trigger again for 20 seconds.
5. Close the material container using the cover to prevent the contamination of the material in the material container.

42 Setting the spray pattern

42.1 Spray pattern

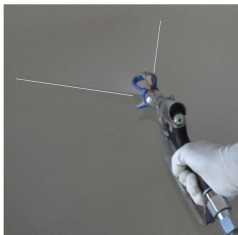


Fig. 45: Spray pattern

1. Spray a test sample.
2. Set the pressure such that there are no sharp edges.
3. Use the spraying nozzles with a smaller opening if sharp edges cannot be rectified by the pressure setting.
4. Hold the spray gun perpendicular to the workpiece surface at a distance of 25-30 cm.

42.2 Spraying the material



Fig. 46: Spraying the material

1. The spraying nozzle opening and the spraying angle determine the application thickness and the size of the spray pattern.
2. If a greater application thickness is required, use a bigger nozzle.



Stopping in case of emergency / EMERGENCY-STOP button

42.3 Interruption of work



NOTE!

Always observe the setting time of the material to be processed:

Clean the machine and high-pressure hoses depending on the setting time of the material and the length of the interruption (pay attention to outside temperature).

The guidelines of the material manufacturers have to be observed regarding breaks.

During short breaks, the spray gun can also be kept in a bucket of clean water.



WARNING!

Risk of injury due to material spraying!

Reduce the system pressure to "0" by turning the rotors backwards (release pressure).

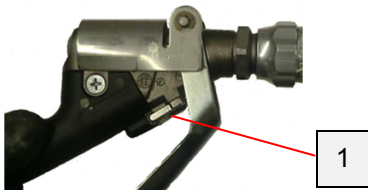


Fig. 47: Safety lever

1. Move the safety lever (1) of the spray gun to the front.
2. Secure the trigger of the spray gun to prevent unintentional spraying.

43 Stopping in case of emergency / EMERGENCY-STOP button

43.1 EMERGENCY-STOP button

Stopping in case of emergency

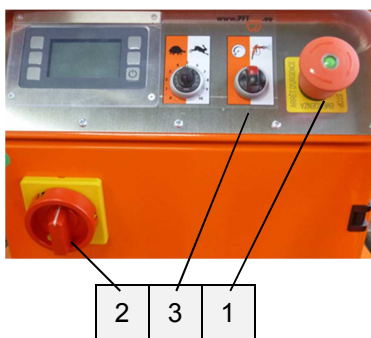


Fig. 48: Stopping

In dangerous situation machine movements have to be stopped as quickly as possible, and the power supply has to be disconnected.

In case of danger proceed as follows:

1. Press the EMERGENCY-STOP button (1).
2. Turn the main switch (2) to position "0".
3. Turn the selector switch of the pump motor (3) to position "0".
4. Inform responsible person at the operational site.
5. If necessary, call for medical assistance and a fire brigade.
6. Recover persons from the danger zone, initiate First Aid measures.
7. Keep access routes free for emergency vehicles.

Action in case of power cut

After the rescue operations

8. If the severity of the emergency permits inform the competent authorities.
9. Assign specialised personnel with the troubleshooting.



WARNING!

Danger to life from premature reactivation!

On reactivation there is danger to life for all persons in the danger zone.

- Before reactivation ensure that there are no persons in the danger zone.

10. Check the system before reactivation and ensure that all safety equipment is installed and functional.



DANGER!

Never loosen the hose couplings unless the high-pressure hose is depressurised (check the hose pressure on the display). The material could burst out under high pressure and result in serious injuries, especially injuries to the eyes.

Torn off hoses can beat about and injure bystanders!

44 Action in case of power cut

44.1 Turn the selector switch of the pump motor to position “0”

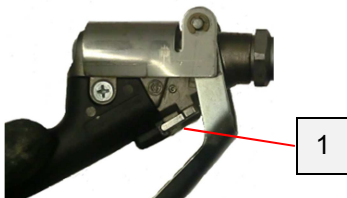


Fig. 49: Safety lever

1. Press the trigger of the spray gun until there is no pressure any longer.
2. Move the safety lever (1) of the spray gun to the front.
3. Secure the trigger of the spray gun to prevent unintentional spraying while restarting the machine.



Work on troubleshooting

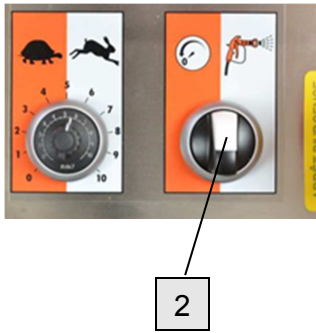


Fig. 50: Selector switch at the middle position

1. Turn the selector switch of the pump motor (2) to the middle position.



DANGER! **Overpressure on the machine!**

When opening machine parts they can open in an uncontrolled manner and injure the operator.

- Open machine only when the system pressure drops to "0 bar".



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

Discharged material may cause severe injuries.

Therefore:

- Never look into the spray gun.
- Always wear protective goggles.
- Always position yourself in such a way that you are not hit by the material being discharged.

45.1 Restarting after a power failure

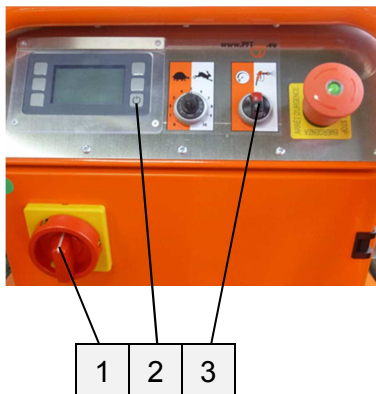


Fig. 51: Restart interlock



NOTE!

The SWING airless is equipped with a restart interlock. In case of a power failure, start the machine system as follows.

1. Turn the main switch (1) to position "I".
2. Press the button (2) on the display for approximately 3 seconds.
3. The SWING airless starts as soon as the selector switch (3) of the pump motor is turned clockwise.



NOTE!

In case of a longer power failure, the SWING airless and the material hoses have to be cleaned immediately.

46 Work on troubleshooting

46.1 Reaction in the event of faults

The following strictly applies:

1. In the event of faults presenting immediate danger to persons or property, activate the EMERGENCY-STOP function immediately.
2. Determine cause for fault.
3. If the rectification of faults requires works in the danger zone, switch off the system and secure against restarting.

Work on troubleshooting



4. Determine cause for fault.
5. If the rectification of faults requires works in the danger zone, switch off the system and secure against restarting.
6. Inform the manager on site immediately about the fault.
7. Depending on the type of fault commission authorised skilled personnel or rectify the fault yourself.



NOTE!

The following fault table gives information on who is authorised to rectify the fault.

46.2 Fault displays



Fig. 52: Fault display

The following installation indicates faults:

Pos.	Light signal	Description
1	Selector switch of the red pilot lamp	Lights up in the event of a fault in the motor

46.3 Faults

The following chapter describes possible causes for faults and the activities carried out for their rectification.

In case faults occur frequently, shorten the maintenance intervals in accordance with the actual load.

In the event of faults that cannot be rectified by means of the following notes, kindly contact the dealer.

46.4 Safety

Personal protective equipment

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

- Protective clothing.
- Protective goggles, protective gloves, safety shoes, ear protection.
- The work for rectification of faults described here can be carried out by the operator, unless marked otherwise.
- Some works must be carried out only by specially trained skilled personnel or exclusively by the manufacturer. Information on this can be found in the description of the individual faults.
- Work on the electrical system must, in principle, be carried out only by electricians.



46.5 Table of faults

Fault	Possible cause	Solution	Rectification by
Machine does not start Current	Power supply not in order	Repair power supply	Service engineer
	EMERGENCY-STOP button	Release the EMERGENCY-STOP	Operator
	Main switch not activated	Activate main switch	Operator
	RCCB was triggered	Reset RCCB	Service engineer
	The "ON / OFF" button on the display is not pressed	Press the "ON / OFF" button	Operator
	Defective frequency converter	Replace the frequency converter	Service engineer
Machine does not start Material	Excessively thickened material in material container	Empty the material container and start again	Operator
	Pump is jammed, cannot be cleared	Dismantle the pump and clear it	Operator
Pump motor does not start	Pump motor defective	Exchange pump motor	Service engineer
	Connection cable defective	Change connection cable	Service engineer
	The selector switch of the pump motor is not switched on	Switch on the selector switch of the pump motor	Operator
Machine stops after a short while	Defective pressure sensor	Check or replace the pressure sensor	Service engineer
	The cut-off pressure is set too low	Increase the cut-off pressure	Operator
Machine does not switch off	Defective pressure sensor	Check or replace the pressure sensor	Service engineer
The fault pilot lamp lights up	Overload due to the pump getting blocked with dry material	Run the machine in backward mode, otherwise remove pump and clean it	Service engineer
Leaky spray gun	Parts in the spray gun are worn or contaminated	Replace or clean the parts in the spray gun	Service engineer
Leaky nozzle unit	The nozzle has been incorrectly mounted	Mount the nozzle correctly	Operator
	The gasket of the nozzle is missing	Insert the gasket	Operator
	Gasket is contaminated	Clean the gasket	Operator

Work on troubleshooting

Fault	Possible cause	Solution	Rectification by
Poor spray pattern	The material is too viscous	Thin down the material	Operator
	The spray nozzle is worn or contaminated	Replace or clean the spray nozzle	Operator
	The spray nozzle is clogged	Clean the spray nozzle	Operator
	Rotor worn or defective	Replace rotor	Service engineer
	Rotor too deep in pressure flange	Replace pressure flange	Service engineer
	No original PFT spare parts	Use original PFT spare parts	Service engineer
The spray gun does not spray	The spray nozzle is clogged	Clean the spray nozzle	Operator
	The spray nozzle is incorrectly mounted	Turn the spray nozzle in the correct direction	Operator

46.6 Signs for blocked hoses:

- Implementation by operator:
- Blockages can occur in the pressure reducer or in the high-pressure hoses.
- Indications are:
 - rapidly increasing pressure head,
 - blocking of pump,
 - running difficulties or blockage of the pump motor,
 - Material does not exit the spray gun

46.7 Causes for this could be:

- Extremely worn high-pressure hose,
- Bent high-pressure hose,
- Clogging of the pressure reducer,
- strong tapering at the couplings,
- leaks at the couplings,
- badly pumpable and redemixed materials.

46.8 Earlier damage to the high-pressure hose**NOTE!**

If a passenger car or a lorry runs over a high-pressure hose, the hose may be severely damaged and burst under pressure.

In the case of the old high-pressure hose, the risk of damage increases. Replace high-pressure hoses at the latest after 5 years.



Removal of clogging in hoses



Fig. 53: Pressure display



WARNING! **Risk of injury due to material spraying!**

In order to reduce the risk of severe injuries, always ensure that the display does not show any pressure.

47 Removal of clogging in hoses



DANGER! **Danger from discharged material!**

Never loosen the hose couplings as long as the system pressure is reduced. Material to be conveyed can be discharged under pressure and cause injuries particularly to the eyes.

Persons commissioned with the cleaning of clogged hoses have to wear personal protective equipment for safety reasons, and to position themselves in such a way that they cannot be hit by discharged material. Other persons have to clear the area.

47.1 Removal of clogging in the spray nozzle

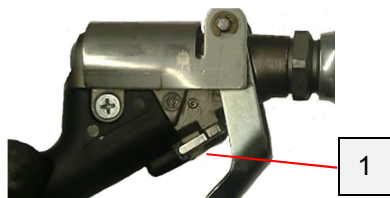


Fig. 54: Safety lever

1. Stop the spraying process immediately if the spray nozzle clogs while spraying.
2. Move the safety lever (1) of the spray gun to the front.



Fig. 55: Cleaning the nozzle



WARNING! **Risk of injury due to material spraying!**

In order to reduce the risk of severe injuries, always ensure that the display does not show any pressure.

Removal of clogging in hoses



47.2 Change the direction of rotation of the pump motor in case of clogging

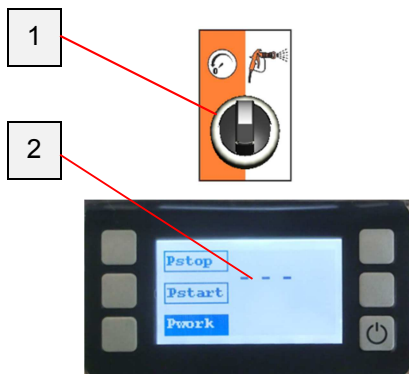


Fig. 56: Change direction of rotation

1. Turn the selector switch of the pump motor (1) briefly anti-clockwise until the pressure on the display (2) has dropped to "0 bar".



WARNING! Risk of injury due to material spraying!

In order to reduce the risk of severe injuries, always ensure that the display does not show any pressure.

47.3 Turn the nozzle handle 180°



Fig. 57: Nozzle handle

If the spray pattern has deteriorated due to a clogged nozzle:

1. Turn the nozzle handle (1) by 180° so that the broad part of the nozzle handle is pointed towards the front.
2. Turn the selector switch of the pump motor clockwise.
3. Direct the gun towards a bucket.
4. Press the trigger (2) of the gun to remove the clogging.
5. Turn the selector switch of the pump motor briefly anti-clockwise until the pressure on the display has dropped to "0 bar".
6. Again turn the nozzle handle (1) by 180° and bring it to the original position.

47.4 The clogged spray nozzle is not cleared

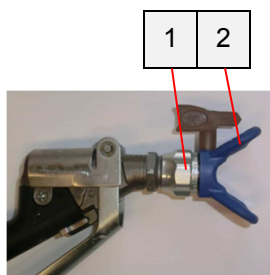


Fig. 58: Spray nozzle



WARNING! Risk of injury due to material spraying!

The system pressure should not show any pressure. Refer to "Change direction of rotation of the pump motor in case of clogging"

1. Loosen the coupling nut (1) and remove the spray nozzle (2) from the spray gun.
2. Clear the clogging by blowing air through the nozzle or soaking it in water.
3. If the clogging is not cleared, knock the flat rear side of the spray nozzle.



End of work / clean machine



Attention!

Never place the entire gun in the solvent. This may damage the gaskets.

47.5 Cleaning the spray nozzle during daily usage

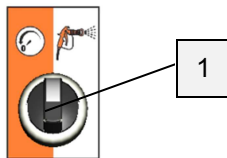


NOTE!

Do not wipe off the material which has accumulated on the gun or around the spray nozzle before the pressure is released.

Cleaning the nozzle at regular intervals during the day to reduce the material deposits. Clean the nozzle and the nozzle protector at the end of the working day. Clean the spray nozzle using water and a brush.

47.6 Switch machine back on after blockage has been cleared



1. The SWING airless starts as soon as the selector switch (1) of the pump motor is turned clockwise.

Fig. 59: Restarting

48 End of work / clean machine

48.1 Emptying the material container



Fig. 60: Selector switch at the middle position

The machine has to be cleaned daily after work:



DANGER!

Danger to life from unauthorised restarting!

When working with the machine 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.

- Switch off all power supplies before starting any work and secure against restarting.
- If protective covers have been removed for cleaning purposes, they must be properly put back again without fail after completion.

1. As soon as the container has only a small amount of residual material left, turn the selector switch of the pump motor (1) to the middle position.

48.2 Pressure-free system/pressure release



Fig. 61: Pressure-free display



WARNING!

Risk of injury due to material spraying!

The system pressure should not show any pressure.
Refer to "Change direction of rotation of the pump motor in case of clogging"

48.3 Removing the spray nozzle

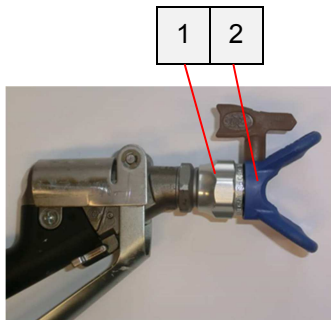


Fig. 62: Spray nozzle

1. Loosen the coupling nut (1) and remove the spray nozzle (2) from the spray gun in order to clean the spray gun.
2. Clean the spray nozzle using water and a brush.



Fig. 63: Cleaning

3. Clean the material container using water.
4. Turn the selector switch of the pump motor clockwise.



Fig. 64: Cleaning

5. Wash the material container with water until clean water discharges from the spray gun.
6. Screw the spray nozzle again after releasing the pressure and securing the trigger.



49 Filter element of SWING airless L

49.1 Cleaning the filter element

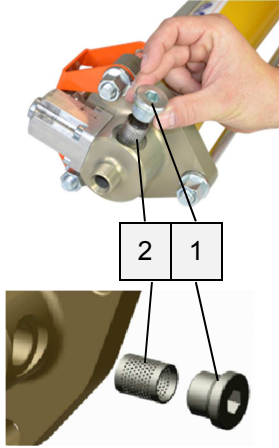


Fig. 65: Filter element



NOTE!

Clean the filter element every day.



WARNING!

Risk of injury due to material spraying!

The system pressure should not show any pressure on the display.

1. Turn the locking screw (1) of the pressure reducer.
2. Remove the filter element (2) from the pressure reducer and clean it if necessary.
3. Replace the damaged or severely contaminated filter (filter element of SWING airless, article number 00472953).

49.2 After cleaning



NOTE!

After cleaning the machine, the pump unit and the conveying hose must be rinsed with easy RUN.

Dilute easy RUN with water.

Care product easy RUN 5 litre - container article number 00507791

50 Replacing the pump

50.1 Secure against restarting



DANGER!

Danger to life from unauthorised restarting!

When working with the machine 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.

- Switch off all power supplies before starting any work and secure against restarting.
- If protective covers have been removed for cleaning purposes, they must be properly put back again without fail after completion.

Replacing the pump

50.2 Change pump



Fig. 66: Installing the machine

1. Place the SWING airless L on the rear-side clamp to ensure easy installation of the pump.
2. Put up the machine on a stable, even surface and secure against unwanted movements.



DANGER!
Risk of contusion at the pump unit!

When assembling / dismantling the pump unit, there is a risk of limbs getting crushed.

50.3 Warm surfaces of the pump unit



WARNING!
Risk of injury due to warm surfaces!

The pump unit can get heated up during operation depending on the load.

Be careful when touching.

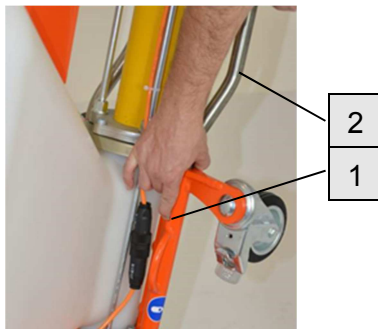


Fig. 67: Removing the handle

3. Press the push button (1) and pull the carrying or sliding handle (2) from the frame (helps in easy installation of the pump).



DANGER!
Risk of injury due to not latching the push button!

Make sure that the push button is correctly latched again in the slider handle..

50.4 Remove filter element

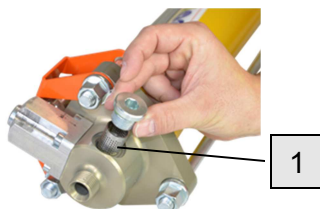


Fig. 68: Filter element



NOTE!

If not Airless - enabled materials, the filter element (1) must be removed.



Replacing the pump

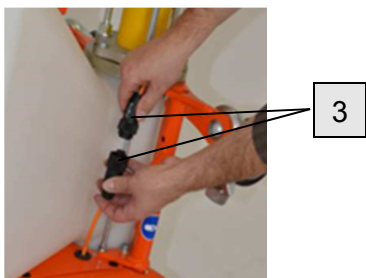


Fig. 69: Pressure switch-off

4. Loosen the screwed connection (3) for the pressure switch-off.



Fig. 70: Loosening the screws



5. Remove this by turning the pump.
6. Loosen the three screws (4) of the suction flange.

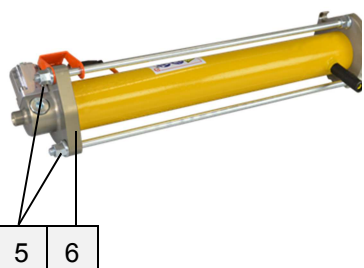


Fig. 71: Loosening the nuts

7. Loosen the nuts (5) of tie rods and remove the pressure reducer (6).



NOTE!

Assembled pump (rotor in stator) are stored for a few days only as rotor and stator can get connected inseparably in case of prolonged storage.

50.5 Damaged pump unit



Fig. 72: Damaged pump unit



DANGER!

Danger of injury due to damaged pump unit!

Obvious damaged tie rods (1) on the thread or a damaged pressure flange (2) must be replaced.
At high pressure, the pressure flange may break.

Switching off SWING airless L



51 Switching off SWING airless L

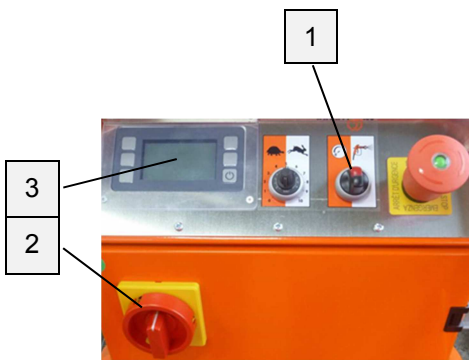


Fig. 73: Switching off

1. Ensure that the machine is depressurised.
2. Turn the selector switch (1) of the pump motor to the middle position.
3. Turn the main switch (2) to position "0".
4. The SWING airless L is switched off.
5. The display (3) does not light up any longer.

52 Maintenance

52.1 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.



52.2 Remove connection cable

Electrical system

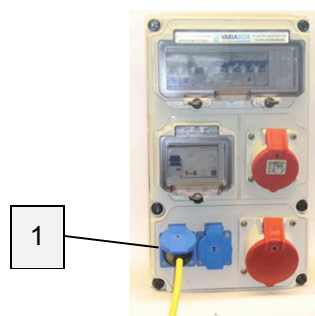


Fig. 74: Remove connection cable



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:

- Switch off the energy supply before starting any work and secure against restarting.
- Disconnect the power supply by removing the connection cable (1).

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.

52.3 Environmental protection

Observe the following notes on environmental protection when carrying out maintenance works:

- Remove the discharged, exhausted or surplus grease at all greasing points that are lubricated manually and dispose of in accordance with the local applicable regulations.
- Collect replaced oil in suitable containers and dispose of in accordance with the local applicable regulations.

52.4 Maintenance plan

The following paragraphs describe the maintenance works that are required for an ideal and trouble-free operation.

In the event that increased wear is detected during regular checks, the required maintenance intervals have to be shortened according to the actual signs of wear.

Should you have any queries regarding maintenance works and intervals contact the manufacturer, see page 2 for service addresses.

Maintenance

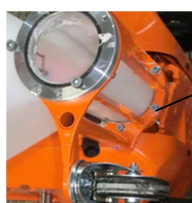


NOTE!

Maintenance is limited to a few checks. Thorough cleaning after use is the most important maintenance.

Interval	Maintenance work	To be carried out by
Daily	Visual and functional inspection of all safety installations.	Operator
	Check all parts subject to wear.	
	Check pressure hoses and screwed connections	
	Check the safety lever of the spray gun	
	Visual inspection of the electrical cables	
Yearly	Screwed connections	Service engineer

52.5 Lubricate the sealing unit



Lubricate the sealing unit (1) every month using the lubrication nipple.

Fig. 75: Lubrication

52.6 Actions after completed 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 equipment were removed from the work area.
5. Clean the work area and remove any spilled materials such as liquids, processing material or similar.
6. Ensure that all safety systems of the installation work perfectly.



53 Disassembly

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

53.1 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 one 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.

Disposal



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.

53.2 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.

54 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.



55 Index

A

Accessories	16
Action in case of power cut.....	40
Actions after completed maintenance	54
Activate / deactivate	35
After cleaning.....	49
Airless 306 pump unit.....	13
Assembling the bag squeezer	31
Assembly of SWING airless L	12
Assembly units	13

C

Causes for this could be:	44
Change pump	50
Change the direction of rotation of the pump motor in case of clogging	46
Cleaning the filter element.....	49
Cleaning the spray nozzle during daily usage....	47
Connected load 400 V	8
Connecting a spray gun.....	29
Connecting the high-pressure hose	26
Connecting the power supply 230V.....	25
Connecting the power supply 400 V.....	26
Connection cable 230V	15
Connection value 230 V	9
Connections.....	14
Control cabinet 400 V Item number 00531099 ..	14
Control cabinet article number 00451361	13

D

Damaged pump unit	51
Danger of death from electric current!	22
Description of SWING airless L	19
Dimension sheet of SWING airless L	10
Dimension sheet of SWING airless L with a bag squeezer	10
Disassembly	55, 56
Display function with dry run protection.....	34
Disposal	56

Division	8
----------------	---

E

Earlier damage to the high-pressure hose	44
EC Declaration of Conformity	6
Electrical connection 400 V	15
Electrostatic charge	18
EMC test	11
EMERGENCY-STOP button.....	24, 39
Emptying the material container	47
End of work / clean machine.....	47
Environmental protection	53
Examination	7
Examination by machine operator	7

F

Fault displays	42
Faults	42
Filling the material container with material	30
Filter element of SWING airless L	49
Flowability / flow characteristics	19
Functional description	34
Functioning principle of SWING airless L	19

G

General information	7, 8
---------------------------	------

I

Index	57
Information service	16
Inserting the reverse nozzle in the nozzle protector	30
Intended purpose of SWING airless L	17
Intended purpose of the spray gun	17
Intended use of SWING airless L	17
Interruption of work	39

K

Keep the manual for future reference	8
--	---

L

Lubricate the sealing unit.....	54
---------------------------------	----

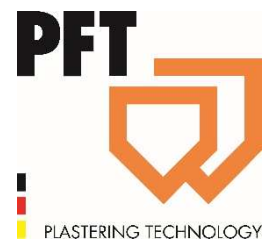
Index

M		Removal of clogging in the spray nozzle	45
Main switch	33	Remove connection cable.....	53
Maintenance	52	Remove filter element	50
Maintenance plan	53	Removing the spray nozzle.....	48
Material:	19	Replacing the pump	49
Monitoring activation	35	Restarting after a power failure.....	41
Monitoring the machine	32	Rinse the rotor / stator before use	29
Mortar hose connection	14	Risk due to material spraying.....	32
Mortar hoses	26	Risk of fire and explosion	36
Moving the safety lever	37	S	
N		Safety	52, 55
Name plate.....	11	Safety	42
O		Safety	23
Operating conditions	9	Safety instructions for transport	20
Operating manual	7	Safety rules	19
Operating modes	15	Secure against restarting	49
Operation	22, 23	Securing the spray gun	33
Overview	12	Selector switch pump motor.....	15, 37
P		Setting parameters.....	35
Packaging	20, 22	Setting the cut-off pressure (Pstop)	33
Periodic inspection.....	7	Setting the spray pattern.....	38
Personal protective equipment		Setting the switch-on pressure (Pstart).....	34
operation	23	Settings view	34
Personal protective equipment	42	Signs for blocked hoses:.....	44
Personnel.....	55	Sound power level	11
Power values of the Airless 306 pump unit	9	Spare parts service	16
Pre-lubricating the pump.....	30	Speed controller	16
Preparing the machine.....	24	Spray pattern.....	38
Pressing the trigger.....	38	Spraying the material	38
Pressure-free system/pressure release.....	48	Stopping in case of emergency.....	39
Protective equipment	32	Stopping in case of emergency / EMERGENCY- STOP button.....	39
Putting the machine into operation	37	Storage.....	20
Q		Storage and shelf life	28
Quality Control sticker.....	11	Supply pressure	18
R		Supply pressure of the machine	18
Reaction in the event of faults	41	Switch machine back on after blockage has been cleared.....	47
Recoil of spray gun	18	Switching off SWING airless L	52
Removal of clogging in hoses.....	45		



Switching on SWING airless L.....	33	Turn the nozzle handle 180°.....	46
Switching on the display	33	Turn the selector switch of the pump motor to position	40
T		V	
Table of faults	43	Ventilation	18
Technical data	8	Vibrations	11
The clogged spray nozzle is not cleared	46	W	
The machine must be earthed.....	18	Warm surfaces of the pump unit.....	50
Tips from practical experience.....	27	Work on troubleshooting.....	41
Transport	20, 21	Working with the bag squeezer	31
Transport inspection	20		
Transport with passenger car	21		

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