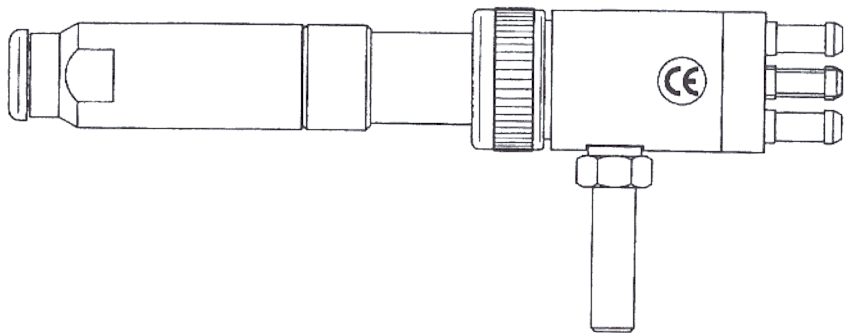


WALTHER PILOT

Operating instructions
Model WA 80 Type 20 380



Die Beschichtungs-Experten

Contents

- 1 General**
- 1.1 Proper use
- 1.2 Improper use
- 2 Technical description**
- 3 Safety**
- 4 Using the spray gun**
- 4.1 Connections for control air, atomising air and material
- 4.2 Spraying a test pattern
- 4.3 Changing the spray pattern
- 5 Parts list**
- 6 Exploded diagram**
- 7 Re-tooling the spray gun**
- 7.1 Distributor cone
- 7.2 Changing the material nozzle
- 7.3 Changing the material needle
- 7.4 Changing the needle seal
- 8 Technical data**
- 9 Cleaning and maintenance**
- 10 Troubleshooting**
- 11 EC Conformity Declaration**

Please note our terms of sale and delivery.

Issue: 03.2000

General

1.1 Proper use

The automatic spray gun must be used only for processing sprayable materials in tubes and cavities. in particular:

- lacquers and paints
- grease, oil and anti-corrosion agents
- adhesives, grease, oil and anti-corrosion agents
- ceramic glazes
- stains

If you intend to spray materials that are not listed here, please contact WALTHER Spritz- und Lackiersysteme GmbH, Wuppertal.

The sprayable materials must be sprayed only on workpieces or objects.

The temperature of the material to be sprayed must not exceed 80°C.

The model PILOT WA 20 380 is not a hand-held spray gun and must therefore be mounted in a suitable bracket.

Proper use of the spray gun also includes the fact that you have read, understood and observed all information, advice and safety requirements presented in this instruction manual.

1.2 Improper use

The spray gun must not be used in any other way than as described above in the section "Proper use".

Any other use is improper.

Improper use includes:

- spraying materials onto persons or animals
- spraying liquid nitrogen

2 Technical description

The model PILOT WA 20 380 is operated automatically by compressed air and is controlled via 3/2-way control valves. Hand-operated, foot-operated or solenoid-valve operated valves can be used for this purpose.

First, the atomising air is introduced by a 3/2-way valve.

Then, the 3/2-way control valve required for the control air is actuated.

The compressed air flowing into the cylinder chamber moves the control piston and opens the material feed.

If the control air is interrupted by the 3/2-way valve, the compressed air in the cylinder chamber is allowed to escape. The spring pressure of the piston spring shuts off the material feed to the material nozzle.

After this, the atomising air is switched off by the 3/2-way valve.

The spray gun works with the equal pressure method. This means that the atomising air pressure and the material pressure must be almost the same.

All parts which are in contact with the material are made of corrosion-free stainless steel.

3 Safety

The spray gun must be used only by trained and qualified persons.

All relevant rules of safety and workers' safety regulations applicable in the country or area of use must be fully observed.

Observe the instructions given by the manufacturers of the spraying material and the cleaning agents with regard to safety and proper use.

Use the spray gun only in well-ventilated rooms. Fire, naked flames and smoking are prohibited within the working area.

Always wear the regulation breathing masks, protective clothing and hearing protection when using the spray gun.

Exhaust air which contains particles must be kept away from the working area and operating personnel. Make sure that adequate exhaust extraction is provided.

When spraying materials, keep your hands and other parts of the body away from the pressurised nozzle of the spray gun.

- Do not direct the spray gun at persons or animals.
- Before carrying out maintenance or servicing, ensure that the air and material feed to the spray gun have been de-pressurised.

Only those air hoses which have a total electric leakage resistance of <100 million ohms must be used.

After carrying out assembly and maintenance work, ensure that all nuts, bolts and screw connections have been fully tightened.

Use only original spare parts, since WALTHER can only guarantee safe and fault-free operation for original parts.

For further information on the safe use of spraying equipment, please contact WALTHER Spritz- und Lackiersysteme GmbH, Wuppertal.

4 Using the spray gun

Before using the spray gun, ensure that the following conditions apply:

- The control air pressure is applied to the spray gun
- The atomising air pressure is applied to the spray gun
- The material pressure is applied to the spray gun

4.1 Connections for control air, atomising air and material

Connect the control air connector (via the 3/2-way valve) to the spray gun "ST" and set the control air pressure (min. 4.5 bar).

Connect the atomising air connector to the air hose (filtered compressed air supply) and to the atomising air connections "SP".

Switch on the compressed air and set the required atomising air pressure at the reducing valve (max. 6 bar).

Fill the pressure pot with the material to be sprayed and close the lid.

Connect the material feed hose to the pressure pot or the pump and to the material connection "M". Set the required material pressure (max. 6 bar).

Open the material valve on the pressure pot.

4.2 Spraying a test pattern

A test spray pattern should always be made whenever:

- the spray gun is used for the first time
- the spraying material is changed
- the spray gun has been disassembled for maintenance or servicing.

The test pattern can be sprayed on a test workpiece, panel, cardboard or paper.

4.3 Changing the spray pattern

The diameter of the atomising cone can be varied by changing the atomising air.

The material flow rate is determined by the material pressure and the diameter of the material nozzle.

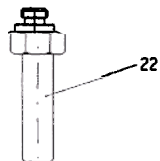
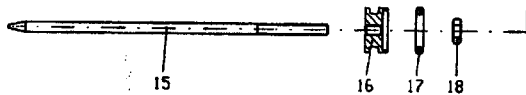
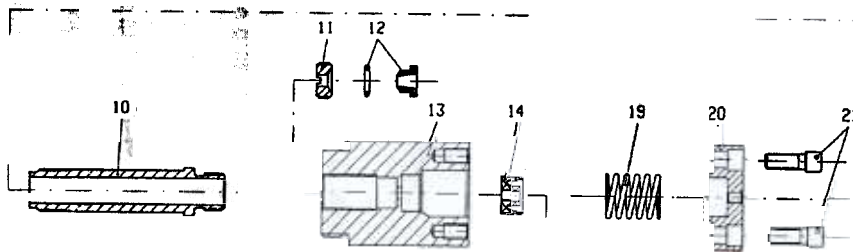
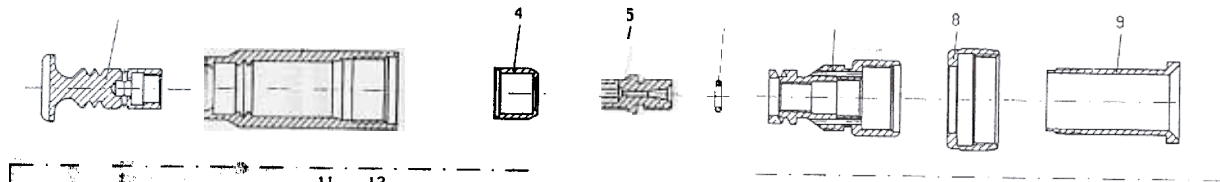
The spray gun can be used for coating tubes with an inner diameter of up to approx. 500 mm.

Parts list WA 20 380

Item	Part number	Name	Item	Part number	Name
1	V 30 146 01 003	distributor cone	13	V 20 305 01 003	body
2	V 30 146 03 003	air sleeve	14	V 09 220 26 000	lip seal
3	V 09 103 33 001	O – ring	15	V 20 380 12 . . 3	material needle
4	V 30 146 02 003	distance sleeve	16	V 20 305 03 004	piston
5	V 30 146 05 . . 3	material nozzle	17	V 09 102 21 001	O – ring
6	V 09 103 20 001	O - ring	18	V 20 305 07 003	needle nut
7	V 30 146 04 003	head piece	19	V 20 305 12 005	piston spring
8	V 20 380 13 003	air cap nut	20	V 20 305 02 003	spring bushing
9	V 20 380 10 003	air tube	21	V 20 305 08 003	hexagonal socket screw
10	V 20 380 11 003	material tube	22	V 20 305 14 003	fastening bolt
11	V 20 305 04 003	packing screw			
12	V 20 305 13 000	needle packing			

* When ordering parts, please state the corresponding dimensions, diameter: 1.0 1.5 mm

We recommend that all parts printed in **bold type** (wearing parts) are kept in stock.



Steuerluftanschluß PK3
Kennzeichnung : ST

Spritzluftanschluß PK4
Kennzeichnung : SP

Spritzluftanschluß PK4
Kennzeichnung : SP

Materialanschluß PK4
Kennzeichnung : M



7 Re-tooling the spray gun

Before re-tooling the spray gun, always ensure that the air supply and material supply to the spray gun have been interrupted.

The combination of air cap, material nozzle and needle for a certain spraying material forms a specially matched unit - the nozzle assembly.

Always exchange the complete nozzle assembly in order to maintain the desired spray pattern quality.

7.1 Changing the distributor cone

1. Unscrew the distributor cone with a screw driver.
2. Installation takes place in reverse order.

7.2 Changing the material nozzle

1. Unscrew the distributor cone with a screw driver.
2. Release the air cap nut.
3. Unscrew the complete unit, air tube and air sleeve SW 14
4. Unscrew the air tube from the air sleeve SW 13 / SW 14
5. Unscrew the material tube from the air sleeve SW 9 / 13
6. Unscrew the material nozzle SW 3
7. Installation takes place in reverse order.

7.3 Changing the material needle

1. Unscrew the spring bushing from the body.
2. Remove the piston spring and pull out the piston together with the material needle.
3. Unscrew the material needle from the piston.
4. Installation takes place in reverse order.
5. The distance between the tip of the material needle and the piston should be set at 62.5 mm

7.4 Changing the needle seal

1. Remove the material needle, as described under 7.3.
2. Continue as described under 7.2.
3. Unscrew the packing screw from the body.
4. Withdraw the needle seal.
5. Installation takes place in reverse order.

8 Technical data

Weight:	144 g	Air consumption at:	
Connections:		1 bar atomising air press.	1.2 m ³ /hr
Atomising air:	2x PK 4	2 bar atomising air press.	1.8 m ³ /hr
Control air:	PK 3	3 bar atomising air press.	2.4 m ³ /hr
Material feed:	PK 4	4 bar atomising air press.	3.0 m ³ /hr
		5 bar atomising air press.	3.6 m ³ /hr
		6 bar atomising air press.	4.8 m ³ /hr
Pressure range:			
Control air pressure:	min. 4.5 bar		
Material pressure:	max. 6 bar		
Atomising air pressure:	max. 6 bar		

The noise level is 83 dB (A)
Technical data are subject to change.

9 Cleaning and maintenance

To ensure that the spray gun functions properly and to maximise its service life, the spray gun must be maintained, cleaned and lubricated regularly.

Before carrying out any maintenance, ensure that the control air and atomising air as well as the material feed are de-pressurised.

Cleaning should be carried out after every colour and material change or according to the degree of contamination.

For cleaning the spray gun, use only those cleaning agents that are specified by the material manufacturer and ensure that they do not contain any of the following components:







- halogenated hydrocarbons, e.g. 1,1,1-trichloroethane, methylene chloride,
- acids or acidic cleaning agents,
- paint strippers,
- regenerated solvents (cleaning thinners).

Never immerse the whole spray gun in solvent or cleaning agent, as this could harm the correct functioning of the gun.

Do not use sharp or hard objects to clean the spray gun, as this might cause damage to precision parts and impair the spraying result.

WALTHER PILOT cannot accept any liability for damage caused by improper treatment of the spray gun.

Troubleshooting

Fault	Cause	Remedy
	Spray fan too wide in the middle	Set spray fan wider
	Spray fan too wide at the ends	Set a rounder fan shape
	Spray finish too coarse "Orange peel" effect	Increase atomising air pressure
	Material coating in the middle of the fan is very thin	Reduce atomising air pressure Increase material pressure
	Spray fan is divided in the middle	Reduce atomising air pressure Increase material pressure
	Spray fan is too rounded	Reduce material pressure Increase atomising air pressure

Gun drips	Material needle or nozzle dirty	Remove and clean
	Material needle or nozzle damaged	Replace
Gun does not open	Control air pressure too low	Increase control air pressure to min. 4.5 bar
Irregular or splattering spray	Insufficient material in container	Fill up with material (see instructions from material manufacturer)
Gun sprays when switched off	O-ring Item 11 damaged	Replace
Material bubbling in material container	Atomising air is entering the material container via the material channel. Material nozzle or air cap not properly tightened	Clean the parts, tighten or replace
Spray fan one-sided	Air cap horn bore dirty	Remove and clean



Die Beschichtungs-Experten

WALTHER
Spritz- und Lackiersysteme
Kärtner Str. 18 —30
Tel.: 0202 / 787-0
Fax: 0202 / 787-217

EC Conformity Declaration

We hereby declare that the spray gun

- model: Walther PILOT WA Block80
type designation WA 20 380
- year of first manufacture: 1999
- specified use:
processing sprayable materials
- fabrication number: see side of packaging

as described in the accompanying documentation, is in full accordance with the following guidelines:

EC machine guideline 89/392/EWG with amendments 91/368/EWG,
93/44/EWG and 93/68/EWG.

Harmonised standards applied in the versions valid at the time of issue, in particular:

EN 292 (safety of machines)
prEN 1953 (spraying equipment for coating materials)

Note:

This machine is not subject to the requirements of Appendix IV for machines representing a special danger in accordance with Directive 89/392/EWG.
Records are therefore kept on file in our company.

Name: Winfried Wiese
Position in the company: Plant Manager

The WALTHER PILOT Product Range

- Manual spray guns
- Automatic spray guns
- HVLP spray guns
- Two-component spray guns

- Pressure pots
- Pressureless containers
- Agitator systems

- Airless equipment and fluid pumps
- Material circulation systems
- Two-pack systems
- Marking equipment

- Combined-spraying and drying booths
- Exhaust extraction systems with dry filtering
- Exhaust extraction systems with wet filtering
- Powder spraying stands
- Powder spraying equipment
- Adhesive spraying systems

Dryers

- Air supply systems

Breathing masks, breathing equipment and accessories



Die Beschichtungs-Experten

WALTHER Spritz- und Lackiersysteme Kärtnerstr. 18-30
D-42347 Wuppertal Tel. 0202 787-0 Fax 0202 787217
<http://www.walther-pilot.de> E-mail: info@walther-pilot

Issue: 03.2000