D

Das WALTHER PILOT-Programm

- Hand-Spritzpistolen
- Automatik-Spritzpistolen
- Niederdruck-Spritzpistolen (System HVLP)
- Zweikomponenten-Spritzpistolen
- Materialdruckbehälter
- Drucklose Behälter
- Rührwerk-Systeme
- Airless-Geräte und Flüssigkeitspumpen
- Materialumlaufsysteme
- Kombinierte Spritz- und Trockenboxen
- Absaugsysteme mit Trockenabscheidung
- Absaugsysteme mit Nassabscheidung
- Trockner
- Zuluft-Systeme
- Atemschutzsysteme und Zubehör

GB

The WALTHER PILOT Programme

- Hand-Held Spray Guns
- Automatic Spray Guns
- Low Pressure Spray Guns (System HVLP)
- Two-Component Spray Guns
- Material Pressure Tanks
- Nonpressurized Tanks
- Agitator Systems
- Airless Equipment and Transfer Pumps
- Material Circulation Systems
- Combined Spraying and Drying Booths
- Dry Back Overspray Extraction Systems
- Wet Back Overspray Extraction Systems
- Dryers
- Ventilation Systems
- Protective Respiratory Systems and Accessory Items

WALTHER PILOT®
Die Beschichtungs-Experten

Spray Direct @ Sealpump Limited
Tel.: 01642 777750 • Fax: 01642 777730

www.spray-direct.co.uk
Email: sales@spray-direct.co.uk

TÜV CERT
EN ISO 9001
QA: 04 1006056

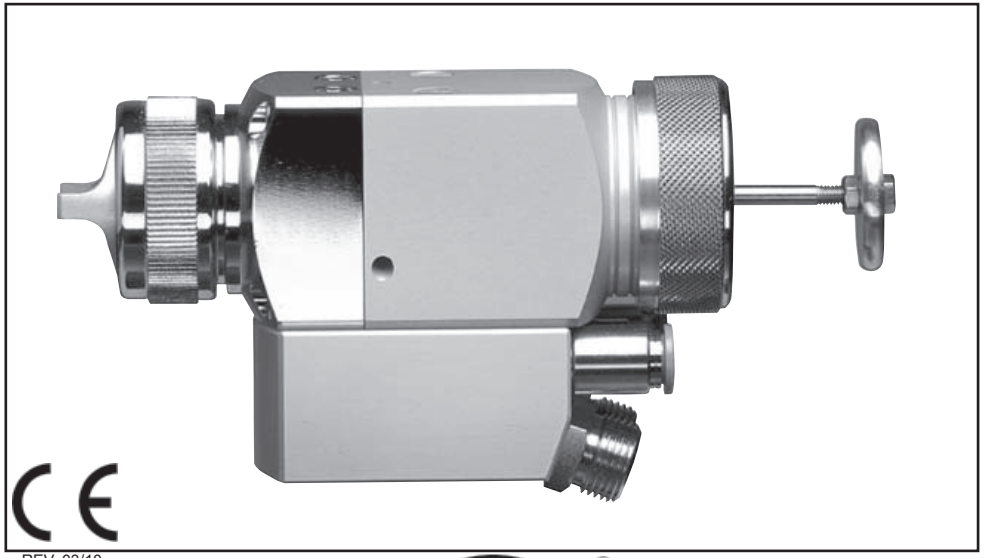
WALTHER PILOT

Betriebsanleitung / Operating Instructions /

D GB

Automatische Spritzpistolen / Automatic Spray Guns

PILOT WA 800
Modelle / Models



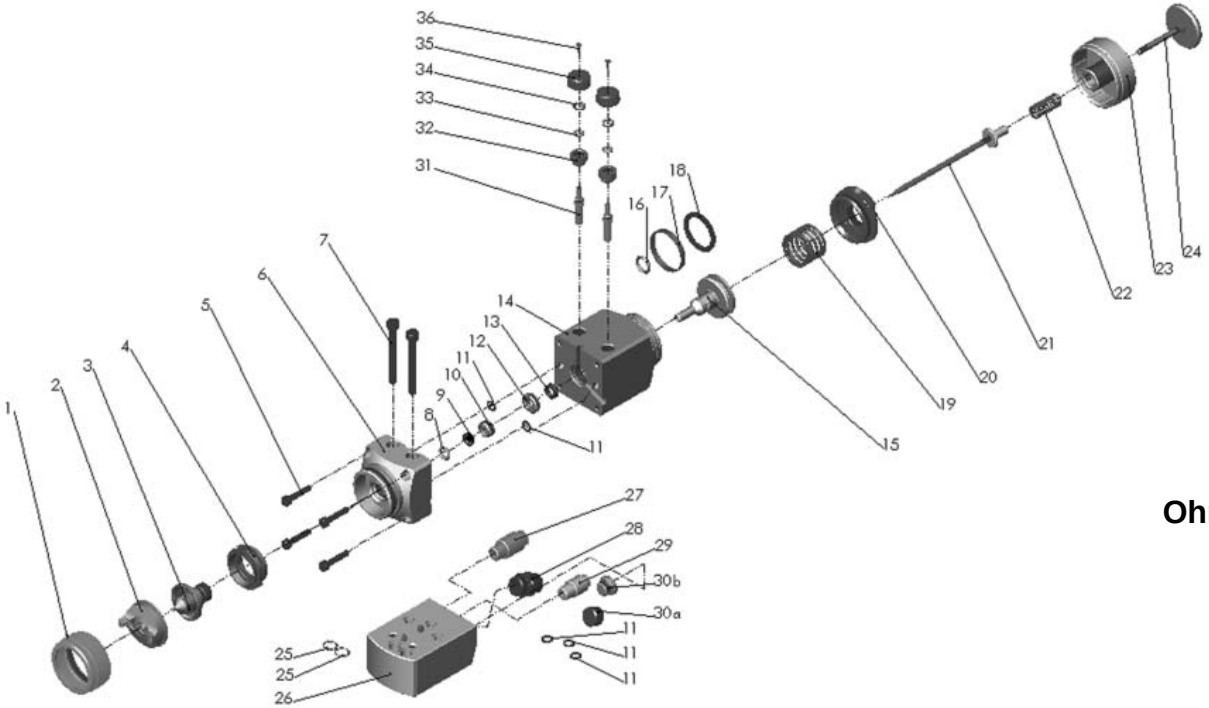
CE

REV. 03/10

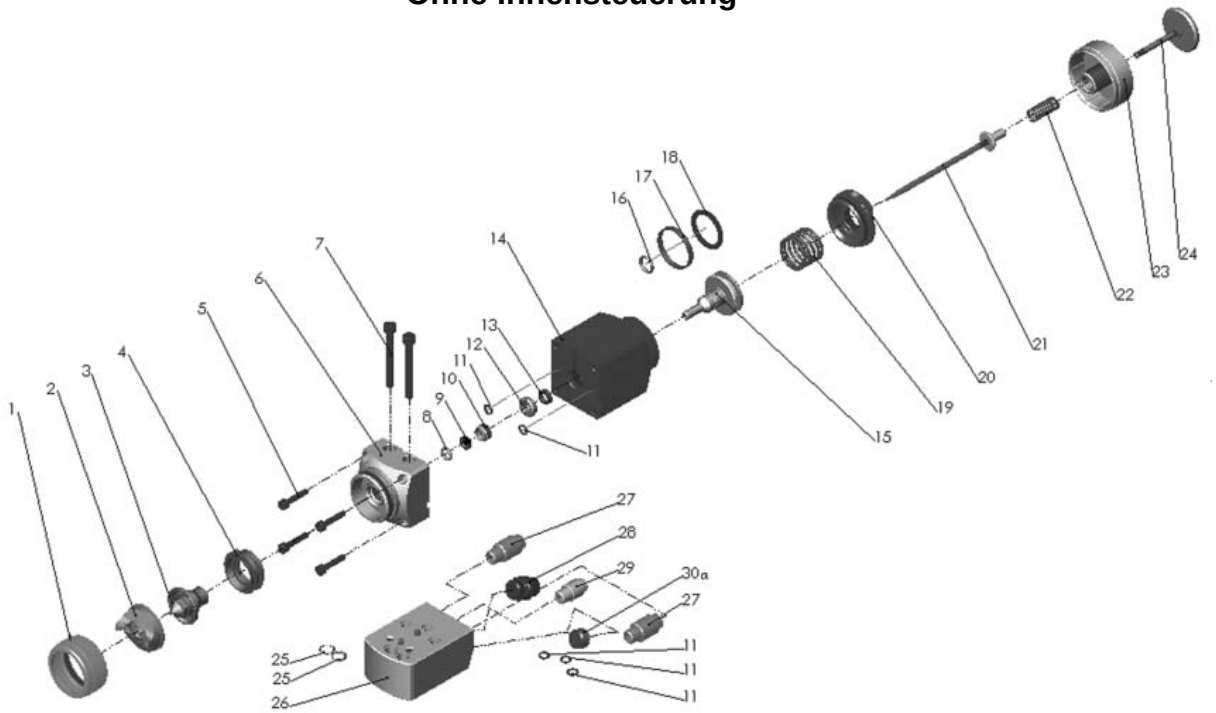
WALTHER PILOT®
Die Beschichtungs-Experten

PILOT WA 800

Mit Innensteuerung



Ohne Innensteuerung



PILOT WA 805

EG-Konformitätserklärung

D

Wir, der Gerätehersteller, erklären in alleiniger Verantwortung, dass das Produkt in der untenstehenden Beschreibung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen entspricht.
Bei einer nicht mit uns abgestimmten Änderung an dem Gerät oder bei einer unsachgemäßen Verwendung verliert diese Erklärung ihre Gültigkeit.

Hersteller	WALTHER Spritz- und Lackiersysteme GmbH Kärntner Str. 18 - 30 D - 42327 Wuppertal Tel.: +49(0)202 / 787 - 0 Fax: +49(0)202 / 787 - 217 www.walther-pilot.de • e-mail: info@walther-pilot.de
Typenbezeichnung	**Automatische Spritzpistolen PILOT WA 800-Serie** WA 800 (Standard mit Innensteuerung) V 20 800 WA 805 (Standard ohne Innensteuerung) V 20 805 WA 810-U (Umlaufversion mit Innenst.) V 20 810 WA 815-U (Umlaufversion ohne Innenst.) V 20 815 WA 820-HVLP (Niederdruck mit Innensteuerung) V 20 820 WA 825-HVLP (Niederdruck ohne Innensteuerung) V 20 825 WA 830-HVLP-U (Niederdruck-Umlauf mit Innenst.) V 20 830 WA 835-HVLP-U (Niederdruck-Umlauf ohne Innenst.) V 20 835 WA 840-MP (Mitteldruck mit Innensteuerung) V 20 840 WA 845-MP (Mitteldruck-ohne Innensteuerung) V 20 845 WA 850-MP-U (Mitteldruck-Umlauf mit Innenst.) V 20 850 WA 855-MP-U (Mitteldruck-Umlauf ohne Innenst.) V 20 855 WA 870-K (Kleberversion ohne Innenst.) V 20 870 WA 871-K-U (Kleberversion-Umlauf o. Innenst.) V 20 871 WA 872-HVLP-K (Niederdruck-Kleberversion ohne Innenst.) V 20 872 WA 873-HVLP-K-U (Niederdruck-Kleberversion-Umlauf o. Innen.) V 20 873
Verwendungszweck	Verarbeitung spritzbarer Materialien

Angewandte Normen und Richtlinien

EG-Maschinenrichtlinien 2006 / 42 / EG
94 / 9 EG (ATEX Richtlinien)
DIN EN ISO 12100 Teil 1
DIN EN ISO 12100 Teil 2 DIN EN 1953
DIN EN 1127-1 DIN EN 13463-1

Spezifikation im Sinne der Richtlinie 94 / 9 / EG

Kategorie 2	**Gerätebezeichnung**	(Ex)	**II 2 G c T 5**	Tech.File,Ref.: 2407

Bevollmächtigt mit der Zusammenstellung der technischen Unterlagen:
Nico Kowalski, WALTHER Spritz- und Lackiersysteme GmbH, Kärntner Str. 18 - 30
D- 42327 Wuppertal

Besondere Hinweise :
Das Produkt ist zum Einbau in ein anderes Gerät bestimmt. Die Inbetriebnahme ist so lange untersagt, bis die Konformität des Endproduktes mit der Richtlinie 2006 / 42 / EG festgestellt ist.

Wuppertal,den 07. Juli 2003

i.V.

Name: Torsten Bröker
Stellung im Betrieb: Leiter der Konstruktion und Entwicklung

Diese Erklärung ist keine Zusicherung von Eigenschaften im Sinne der Produkthaftung. Die Sicherheitshinweise der Produktdokumentation sind zu beachten.

Declaration of CE-Conformity

GB

We, the manufacturers of the equipment, hereby declare under our sole responsibility that the product(s) described below conform to the essential safety requirements. This declaration will be rendered invalid if any changes are made to the equipment without prior consultation with us.

Manufacturer	WALTHER Spritz- und Lackiersysteme GmbH Kärntner Str. 18 - 30 D - 42327 Wuppertal Tel.: +49(0)202 / 787 - 0 Fax: +49(0)202 / 787 - 217 www.walther-pilot.de • e-mail: info@walther-pilot.de
Type Designation	**Automatic Spray Gun PILOT WA 800-Models** WA 800 (Standard version with internal control) V 20 800 WA 805 (Sttandard version without internal control) V 20 805 WA 810-U (circulation version with internal control) V 20 810 WA 815-U (circulation version without internal c.) V 20 815 WA 820-HVLP (Low pressure vers. with internal control) V 20 820 WA 825-HVLP (Low pressure vers.without internal control) V 20 825 WA 830-HVLP-U (Low pres.-circulation vers. with internal c.) V 20 830 WA 835-HVLP-U (Low pres.-circulation vers. without intern c.) V 20 835 WA 840-MP (Mediem pressure with internal control) V 20 840 WA 845-MP (Medium pressure without internal control) V 20 845 WA 850-MP-U (Medium pres.-circulation with internal c.) V 20 850 WA 855-MP-U (Medium pres.-circulation without internal c.) V 20 855 WA 870-K (pressure-adhesive version) V 20 870 WA 871-K-U (pressure-adhesive version-circulation) V 20 871 WA 872-HVLP-K (Low pressure-adhesive version) V 20 872 WA 873-HVLP-K-U (Low pressure-adhesive version-circulation) V 20 873
Intended purpose	Processing of sprayable media

Applied Standards and Directives

EU-Mechanical Engineering Directives 2006 / 42 / EC
94 / 9 EC (ATEX Directives)
DIN EN ISO 12100-1
DIN EN ISO 12100-2 DIN EN 1953
EN 1127-1 DIN EN 13463-1

Specification according 94 / 9 / EC

Category 2	**Part marking**	(Ex)	**II 2 G c T 5**	Tech.File,Ref.: 2407

Authorized with the compilation of the technical file:
Nico Kowalski, WALTHER Spritz- und Lackiersysteme GmbH, Kärntner Str. 18 - 30
D- 42327 Wuppertal

Special remarks :
The named product is intended for installation in other equipment. Commissioning is prohibited until such time as the end product has been proved to conform to the provision of the Directives 2006 / 42 / EC.

Wuppertal, the 7th of July 2003

i.V.

Name: Torsten Bröker
Position: Manager, Design and Development

This Declaration does not give assurance of properties in the sense of product liability. The safety instructions provided in the product documentation must be observed at all times.

List of replacement parts: PILOT WA 800 (Standard with internal control) V 20 800

Pos.	Article-No.	Description
1	V 11 360 04 300	Air cap retaining nut
2	**optional:**	**Air cap for nozzle size**
	V 11 360 30 060*	**0,5 - 1,8 mm ø**
	V 11 360 30 210*	**2,0 - 2,5 mm ø**
3	**optional:**	
	V 20 810 35 . . 3*	**Material nozzle (P)**
4	V 11 700 09 200	Air distribution ring
5	V 20 810 14 003	Socket screw
6	V 20 810 10 003	Front body
7	V 20 810 14 203	Cylinder head screw
8	**V 09 102 33 009**	**O-ring**
9	**V 09 002 53 000**	**Needle seal**
10	V 20 810 42 103	Packing screw
11	**V 09 103 64 009**	**O-ring**
12	V 22 650 43 100	Sealing screw
13	**V 09 220 30 000**	**Lip seal**
14	V 20 810 40 000	Piston casing compl.
15	V 20 810 20 100	Piston
16	**V 09 103 65 000**	**O-ring**
17	**V 20 810 10 510**	**Friction ring-gasket**
18	**V 20 810 10 520**	**O-ring**
19	V 20 606 11 000	Piston spring
20	V 20 810 33 000	Threaded bush compl.
21	**optional:**	
	V 20 810 30 . . 3*	**Material needle compl.**
22	V 20 510 29 003	Needle spring
23	V 20 810 32 000	Cap compl.
24	V 20 510 34 000	Draw bar compl.
25	**V 09 103 66 000**	**O-ring**
26	V 20 810 05 000	Adaptor plate
27	V 66 101 53 015	Push-in-fitting
28	V 00 101 01 003	Double nipple
29	V 66 101 53 013	Push-in-fitting
30a	V 20 540 40 003	Blanking plug
30b	V 66 100 03 568	Plug
31	V 20 810 11 005	Sealing cone
32	V 10 170 10 100	Threaded bush
33	V 09 102 02 007	O-ring
34	V 10 302 02 000	Stuffing box
35	V 10 170 10 300	Adjusting screw
36	V 10 170 25 003	Counter sunk screw

* Please make sure to quote the required size(s) when placing an order for replacemant parts. We recommemd that bold-faced replacement parts (i.e.wearing parts) are held on stock to avoid work stoppages.

Replacement parts - other than given values of PILOT WA 800

Replacement parts: PILOT WA 805 (Standard without internal control) V 20 805

Pos.	Article-No.	Description
14	V 20 815 40 100	Piston casing compl.
27	V 66 101 53 015	Push-in-fitting 2x
30b-36	Parts	not applicable

Replacement parts: PILOT WA 810-U (Circulation with internal control) V 20 810

6	V 20 810 12 003	Front body
28	V 00 101 01 003	Doppelnippel 2x
30a	Blanking plug	not applicable

Replacement parts: PILOT WA 815-U (Circulation without internal control) V 20 815

6	V 20 810 12 003	Front bady
14	V 20 815 40 100	Piston casing compl.
27	V 66 101 53 015	Push-in-fitting 2x
28	V 00 101 01 003	Double nipple 2x
30a-36	Parts	not applicable

Replacement parts: PILOT WA 820-HVLP (Low pressure with internal control) V 20 820

2	**optional:**	**Air cap for nozzle size**
	V 11 631 11 061*	**0,5 - 1,8 mm ø**
	V 11 631 11 211*	**2,0 - 2,5 mm ø**
4	V 11 700 09 100	Air distribution ring

Replacement parts: PILOT WA 825-HVLP (Low press. without internal control) V 20 825

2	**optional:**	**Air cap for nozzle size**
	V 11 631 11 061*	**0,5 - 1,8 mm ø**
	V 11 631 11 211*	**2,0 - 2,5 mm ø**
4	V 11 700 09 100	Air distribution ring
14	V 20 815 40 100	Piston casing compl.
26	V 20 810 06 000	Adaptor plate
27	V 66 101 53 015	Push-in-fitting 2x
30b-36	Parts	not applicable

Replacement parts: PILOT WA 830-HVLP-U (Circulat. with internal control) V 20 830

2	**optional:**	**Air cap for nozzle size**
	V 11 631 11 061*	**0,5 - 1,8 mm ø**
	V 11 631 11 211*	**2,0 - 2,5 mm ø**
4	V 11 700 09 100	Air distribution ring
6	V 20 810 12 003	Front body
28	V 00 101 01 003	Double nipple 2x
30a	Blanking plug	not applicable

Replacement parts: PILOT WA 835-HVLP-U (Circulat. without internal control) V 20 835

2	**optional:**	**Air cap for nozzle size**
	V 11 631 11 061*	**0,5 - 1,8 mm ø**
	V 11 631 11 211*	**2,0 - 2,5 mm ø**
4	V 11 700 09 100	Air distribution ring
6	V 20 810 12 003	Front body
14	V 20 815 40 100	Piston casing compl.
26	V 20 810 06 000	Adaptor plate
27	V 66 101 53 015	Push-in-fitting 2x
28	V 00 101 01 003	Double nipple 2x
30a-36	Parts	not applicable

Replacement parts: PILOT WA 840-MP (Medium pressure with internal control) V 20 840

Pos.	Article-No.	Description
2	**optional:**	**Air cap for nozzle size**
	V 11 360 35 068*	**0,5 - 1,8 mm ø**
	V 11 360 35 218*	**2,0 - 2,5 mm ø**
4	V 11 700 09 100	Air distribution ring

Replacement parts: PILOT WA 845-MP (Medium pres. without internal control) V 20 845

2	**optional:**	**Air cap for nozzle size**
	V 11 360 35 068*	**0,5 - 1,8 mm ø**
	V 11 360 35 218*	**2,0 - 2,5 mm ø**
4	V 11 700 09 100	Air distribution ring
14	V 20 815 40 100	Piston casing compl.
26	V 20 810 06 000	Adaptor plate
27	V 66 101 53 015	Push-in-fitting 2x
30b-36	Parts	not applicable

Replacement parts: PILOT WA 850-MP-U (Circulation with internal control) V 20 850

2	**optional:**	**Air cap for nozzle size**
	V 11 360 35 068*	**0,5 - 1,8 mm ø**
	V 11 360 35 218*	**2,0 - 2,5 mm ø**
4	V 11 700 09 100	Air distribution ring
6	V 20 810 12 003	Front body
28	V 00 101 01 003	Double nipple 2x
30a	Blanking plug	not applicable

Replacement parts: PILOT WA 855-MP-U (Circulation without internal control) V 20 855

2	**optional:**	**Air cap for nozzle size**
	V 11 360 35 068*	**0,5 - 1,8 mm ø**
	V 11 360 35 218*	**2,0 - 2,5 mm ø**
4	V 11 700 09 100	Air distribution ring
6	V 20 810 12 003	Front body
14	V 20 815 40 100	Piston casing compl.
26	V 20 810 06 000	Adaptor plate
27	V 66 101 53 015	Push-in-fitting 2x
28	V 00 101 01 003	Double nipple 2x
30a-37	Parts	not applicable

Repl. parts: PILOT WA 870-K (Adhesive version without internal c.) V 20 870

2	**optional:**	**Air cap for nozzle size**
	V 11 631 12 054*	**0,8 - 1,0 mm ø**
	V 11 631 12 204*	**1,2 - 1,8 mm ø**
	V 11 631 12 254*	**2,0 - 2,5 mm ø**
3	**V 11 641 40 . . 3***	**Material nozzle (K)**
21	**V 20 870 30 . . 3***	**Material needle**

Repl. parts: PILOT WA 871-K-U (Adhesive-circulation without internal control) V 20 871

2	**optional:**	**Air cap for nozzle size**
	V 11 631 12 054*	**0,8 - 1,0 mm ø**
	V 11 631 12 204*	**1,2 - 1,8 mm ø**
	V 11 631 12 254*	**2,0 - 2,5 mm ø**
3	**V 11 641 40 . . 3***	**Material nozzle (K)**
6	V 20 810 12 003	Front body
21	**V 20 870 30 . . 3***	**Material needle**
28	V 00 101 01 003	Double nipple 2x
30a	Blanking plug	not applicable

Repl. parts: PILOT WA 872-HVLP-K (Low pres.-adhesive version without internal c.) V 20 872

2	**optional:**	**Air cap for nozzle size**
	V 11 631 12 054*	**0,8 - 1,0 mm ø**
	V 11 631 12 204*	**1,2 - 1,8 mm ø**
	V 11 631 12 254*	**2,0 - 2,5 mm ø**
3	**V 11 641 40 . . 3***	**Material nozzle (K)**
4	V 11 700 09 100	Air distribution ring
21	**V 20 870 30 . . 3 ***	**Material needle**

Repl. parts: PILOT WA 873-HVLP-K-U (Adhesive-circulation without internal c.) V 20 873

2	**optional:**	**Air cap for nozzle size**
	V 11 631 12 054*	**0,8 - 1,0 mm ø**
	V 11 631 12 204*	**1,2 - 1,8 mm ø**
	V 11 631 12 254*	**2,0 - 2,5 mm ø**
3	**V 11 641 40 . . 3***	**Material nozzle (K)**
4	V 11 700 09 100	Air distribution ring
6	V 20 810 12 003	Front body
21	**V 20 870 30 . . 3 ***	**Material needle**
28	V 00 101 01 003	Double nipple 2x
30a	Blanking plug	not applicable

Repair kit

WALTHER repair kits are available for PILOT WA 800 - WA 855-MP-U and the corresponding versions of adhesive coating PILOT WA 870-K - WA 873-HVLP-K-U spray guns including all wearing parts:

PILOT WA 800 (Standard-versions)	**V 16 800 03 . . 3**
PILOT WA 820 (Low pressure-versions)	**V 16 820 04 . . 3**
PILOT WA 840 (Medium pressure-versions)	**V 16 840 04 . . 3**
PILOT WA 870 (Adhesive-versions)	**V 16 870 02 . . 3**

Nozzle set

Nozzle sets consist of air cap, material nozzle and material needle.

PILOT WA 800 (Standard-versions)	**V 15 800 03 . . 3**
PILOT WA 820 (Low pressure-versions)	**V 15 820 04 . . 3**
PILOT WA 840 (Medium pressure-versions)	**V 15 840 04 . . 3**
PILOT WA 870 (Adhesive-versions)	**V 15 870 02 . . 3**

Nozzle sizes optional: 0,5 • 0,8 • 1,0 • 1,2 • 1,4 • 1,5 • 1,8 • 2,0 • 2,2 • 2,5 mm ø

Contents

1 General

1.1 Identification of Model Version

Models: Automatic Spray Gun PILOT WA 800-Serie

Types:

WA 800	(Standard with internal control)	V 20 800
WA 805	(Standard without internal control)	V 20 805
WA 810-U	(circulation with internal control)	V 20 810
WA 815-U	(circulation without internal c.)	V 20 815
WA 820-HVLP	(Low pressure with internal control)	V 20 820
WA 825-HVLP	(Low pressure without internal control)	V 20 825
WA 830-HVLP-U	(Low pres.-circulation with internal c.)	V 20 830
WA 835-HVLP-U	(Low pres.-circulation without internal c.)	V 20 835
WA 840-MP	(Mediem pressure with internal control)	V 20 840
WA 845-MP	(Medium pressure without internal c.)	V 20 845
WA 850-MP-U	(Medium pres.-circulation with internal c.)	V 20 850
WA 855-MP-U	(Medium pres.-circulat. without internal c.)	V 20 855
WA 870-K	(Adhesive version)	V 20 870
WA 871-K-U	(Aadhesive version-circulation)	V 20 871
WA 872-HVLP-K	(Low pressure-adhesive version)	V 20 872
WA 873-HVLP-K-U	(Low pressure-adhesive version-circulation)	V 20 873

Manufacturer: WALTHER Spritz-und Lackiersysteme GmbH
Kärntner Str. 18-30
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Tel.: 0202 / 787-0
Fax: 0202 / 787-217
www.walther-pilot.de • Email: info@walther-pilot.de

1.2 Normal Use

The automatic spray guns PILOT WA 800, WA 810, WA 815, WA 820, WA 825, WA 830, WA 835, WA 840, WA 845, WA 850, WA 855, WA 870, WA 871, WA 872 and WA 873 are exclusively designed for use with sprayable material types and grades. All material conduction parts are made of stainless steel so as to permit handling of hydrous media such as:
• paints and lacquers
• greases, oils and corrosion preventives
• adhesive compounds
• ceramic glazes and
• pickling solutions
Should the materials which you want to spray not be listed above, please contact us for further and detailed information.
Plase note that sprayable material may only be applied to work pieces and/or similar items.
The temperature of the spraying materials shall never exceed 80 degrees Celsius.

The models PILOT WA 800 and the corresponding versions of adhesive coating PILOT WA 870-K - WA 873-HVLP-K-U are not designed for manual operation, and must be installed in a suitable gun mounting device.

The term normal use also implies that any and all safety warnings, operational handling details, etc., as stated in these operating instructions, must be carefully read, understood and duly complied with.

This equipment complies with the explosion protection requirements of Directive 94/9/EC (ATEX) for the explosion group, equipment category and temperature class indicated on the type plate. When using the equipment, the requirements specified in these Operating Instructions must be observed at all times.

The technical data indicated on the equipment rating plates and the specifications in the chapter "Technical Data" must be complied with at all times and must not be exceeded. An overloading of the equipment must be ruled out.
The equipment may be used in potentially explosive atmospheres only with the authorisation of the relevant supervisory authority.

The relevant supervisory authority or the operator of the equipment are responsible for determining the explosion hazard (zone classification).

The operator must check and ensure that all technical data and the marking of the equipment in accordance with ATEX are compliant with the necessary requirements.

The operator must provide corresponding safety measures for all applications in which the breakdown of the equipment might lead to danger to persons.

If any irregularities are observed while the equipment is in operation, the equipment must be put out of operation immediately and WALTHER Spritz-und Lackiersysteme must be consulted.

Grounding / Equipotential Bonding
You must ensure that the spray gun is properly earthed (grounded) either separately or in connection with the equipment with which it is being used (maximum resistance 10^6 Ω).

1.3 Improper Use

This spray gun shall not be used for purposes other than set forth in the above Chapter *1.2 Normal Use*. Any other form of use and/or application is prohibited. Improper use is for example:
• spraying of material onto persons and animals
• spraying of liquid nitrogen, etc.

2 Technical Description

The models of the PILOT WA 800-version are automatic air-controlled guns operating in combination with a 3/2-way control valve. Hand, foot or an electrical pulse (sensor etc.) can be used.

With internal control:
Actuation of the 3/2-way control valve directs control air into the cylinder inside the gun so as to open - in sequence - the atomizing air and the material input.
The spray jet contour (flat/wide/round) are adjusted for the models PILOT WA 800 / PILOT WA 810-U / WA 820-HVLP / WA 830-HVLP-U / WA 840-MP / WA 850-MP-U / PILOT WA 870-K / WA 871-K-U / WA 872-HVLP-K and WA 873-HVLP-K-U at the gun by way of regulating screws.
Closing of the 3/2-way valve is followed by the control air escaping from the cylinder inside the gun, upon which the spring-loaded material needle returns to its iinitial position, where it shuts the material and atomizing air input off.

Without internal control:
At first the atomizing air (round- and wide/flat jet air pos. 27) is openened by a 3/2-way control valve. Then activate the control air that push back the piston and the material needle to open the material supply. For the models PILOT WA 805 / WA 815-U / WA 825-HVLP / WA 835-HVLP-U / WA 845-MP and WA 855-MP-U the spray jet contour (flat/wide/round) is adjusted by a pressure regulator in the plant.
Closing of the 3/2-way valve is followed by the control air escaping from the cylinder inside the gun, upon which the spring-loaded material needle returns to its iinitial position, where it shuts the material and atomizing air input off.

The material flow rate is adjusted for all models at the gun by the cap (pos. 23).
The material inlet duct of PILOT WA 800-models can be opened manually so as to permit, for example, cleaning of a clogged material nozzle.

The spray guns PILOT WA 800-models can be connected to material pressure tanks and pumping systems.
The models PILOT PILOT WA 810-U / WA 815-U / WA 830-HVLP-U / WA 835-HVLP-U / WA 850-MP-U / WA 855-MP-U / WA 871-K-U and WA 873-HVLP-K-U permit connection to circulation systems.

The models PILOT WA 820-HVLP bis WA 835-HVLP-U / WA 872 HVLP-K and WA 873 HVLP -K-U are solely low-pressure spray guns and operate with a atomizing air pressure of 0.7 bar using an air input pressure of 4.5 bar.
For the models PILOT WA 840-MP to WA 855-MP-U the air input pressure is from 3.0 to 3.3 bar for a spraying air of 1.2 to 1.4 bar

3 Safety Warnings
3.1 Safety Warning Symbols

Warning
This pictograph and the accompanying warning note „Warning“ indicate possible risks and dangers for yourself. Possible consequences: Injuries of any kind.

Caution
This pictograph and the accompanying warning note „Caution“ indicate possible damage to equipment. Possible consequences: Damage to equipment, workpieces, etc.

Notice
This pictograph and the accompanying note „Notice“ indicate additional and useful information to help you handling the spray gun with even greater confidence and efficiency.

3.2 Generally Applicable Safety Precautions

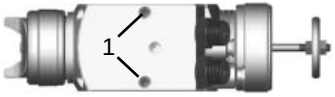
- All applicable accident prevention rules and regulations as well as other recognised industrial safety and health rules and regulations must be observed at all times.
- Use the spray gun only in well-ventilated rooms. Fire, naked flames and smoking are strictly prohibited within the working area. WARNING – during the spraying of flammable materials (e.g. lacquers, adhesives, cleaning agents, etc.), there is an increased risk to health as well as an increased risk of explosion and fire.
- You must ensure that the spray gun is properly earthed (grounded) either separately or in connection with the equipment with which it is being used (max. resistance 10^6 Ω).
- Before carrying out maintenance or servicing work, always ensure that the air and material feed to the spray gun have been de-pressurised. Risk of injury!
- When spraying materials, do not place your hands or other parts of the body in front of the pressurised nozzle or the spray gun. Risk of injury!
- Never point the spray gun at persons or animals. Risk of injury!
- Always observe the spraying and safety instructions given by the manufacturers of the spraying material and the cleaning agent. Aggressive and corrosive materials in particular can be harmful to health.
- Exhaust air containing particles (overspray) must be kept away from the working area and personnel. In spite of these measures, always wear the regulation breathing masks and protective overalls when using the gun. Airborne particles represent a serious health hazard!
- Always wear hearing protection when using the gun or when in the vicinity of a gun that is in use. The noise level generated by the spray gun is approx. 86 dB (A).
- After carrying out assembly or maintenance work, always ensure that all nuts, bolts and screw connections have been fully tightened before the gun is used.
- Use only original replacement parts, since WALTHER can only guarantee safe and fault-free operation for original parts.
- For further information on the safe use of the spray gun and the spraying materials, please contact WALTHER Spritz- und Lackiersysteme GmbH, D-42327 Wuppertal, Germany.

4 Assembly / Installation

This spray gun is delivered in completely assembled condition. Before taking the spray gun into operation perform the following preparations:

4.1 Mounting of Spray Gun

Install the gun in a suitable and stable mounting device as shown in the following example:

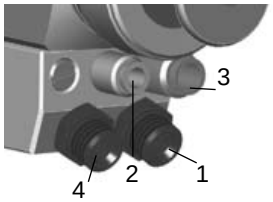


Use the two M 6 bores 1 with a hole centre distance of 36 mm.
Other mounting devices upon request.

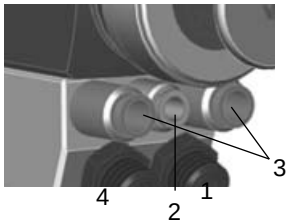
4.2 Connection of Input Lines

Warning
Make sure not to confuse the control and atomizing air connections -risk of injury.

with internal control



without internal control



1 = Material inlet fitting (G 1/4“) marked with **M**
2 = Control air inlet fitting (G 1/8“) marked with **ST**
3 = Atomizing air inlet fitting (G 1/8“) marked with **Z**
4 = Material inlet fitting for the circulation versions of the PILOT WA 800 models
The spray gun is now properly installed and connected and ready for operation.

5 Operational Handling
5.1 Safety Warnings

Please pay special attention to the following safety warnings prior to taking this spray gun into operation!

- Wear proper respiratory protection masks and protective overalls, whenever you are operating this spray gun. Air-borne particles represent a health hazard.
- Make sure to wear suitable haering protectors. The gun produces sound levels of up to 86 dB (A) which may cause hearing defects.
- Open fires, naked lights and smoking prohibited in the working area. Spraying of readily flammable media such as paints and adhesive compounds is always accompanied by the risk of fire and explosion.

5.2 Starting / Stopping Requirements

The following requirements must be met before taking this spray gun into operation:
• control air must be available at the gun.
• atomizing air must be available at the gun.
• material pressure must be available at the gun.

Caution
The material pressure shall not exceed • **10 bar**, as, otherwise, the functional reliabty of the spray gun will suffer.
Adjust the control air pressure to • **at least 4,5 bar**, in order to operate the spray gun.
The operation of the spray gun can be started/stopped by way of the 3/2-way control valve (see the Operating Instructions of the plant systems manufacturer).

Warning
It is important to remember that the spray gun must be relieved of all pressures whenever work is terminated. Lines left in pressurized condition could burst, with their contents likely to injure anybody present nearby.

5.3 Spray Pattern Test

Spray pattern tests should be performed whenever:
• the spray gun is taken into operation for the first time.
• the spraying medium is changed.
• the spray gun was taken apart for servicing or repairs.
The spray pattern can be tested using a work piece sample, a sheet of metal, cardboard or paper.

Warning
Keep away from the front of the spray gun - imminent risk of injury.

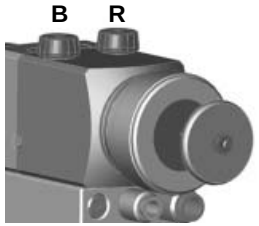
Warning
Make sure that nobody is present in the spraying zone when the gun is started - imminent Risk of Injury.

1. Start the gun to produce a spray pattern sample (see *5.2. Starting/Stopping Requirements*).
2. Inspect the sample and readjust the settings of the gun as may be required (see *5.4 Spray Pattern Adjustments*).

5.4 Spray Pattern Adjustments

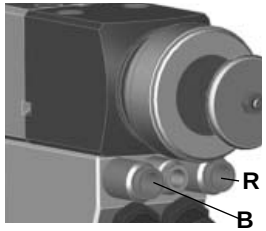
The spray pattern of the PILOT WA 800 models can be adjusted as follows:

Adjusting the jet pattern



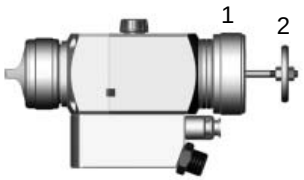
With internal control:
An optimum spray pattern can be regulated by using adjustment screws **B** and **R**.

The adjustment screw **B** regulates the wide/flat jet,
the adjustment screw **R** regulates the round jet.



Without internal control:
The spray pattern is adjusted by a ressure regulator in the plant (see operating instructions of plant systems manufacturer).
The connection **B** is for the wide/flat jet,
the connection **R** is for the round jet.

Adjustment of the material flow rate



Turn cap (1) from the standard position (= notch mark on the piston housing).
• to the inside in order to decrease the material flow rate.
• to the outside in order to increase the material flow rate.
The material flow through the nozzle can be performed without using atomizing air, when the drawbar (2).

Adjustment of the Material Pressure

This adjustment can only be made at the pump or the material pressure tank. Please comply with the operating instructions and safety warnings issued by the manufacturers concerned.

Adjustment of the Atomizing Air Pressure

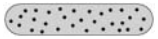
The atomizing air pressure is adjusted at the air pressure reducing valve of the compressor system. Please comply with the operating instructions and safety warnings issued by the manufacturer.

If you wish to change the spraying pattern beyond the adjustments outlined so far, you must retool the spray gun (See *5.5 Retooling of Spray Gun*).
WALTHER offers a great variety of air cap/-material nozzle/needle combinations for this purpose.

Correcting of Spray Pattern Imperfections

The following table shows what to do to correct a spray pattern.

 **desireable spray-painting result**

Spray pattern test	Fault	Necessary adjustment
	Swollen centre	• Spray jet should be flatter
	Swollen ends	• Spray jet should be rounder
	Coarse pearl effect	• Increase atomising air pressure
	Unduly thin paint layer in centre	• Decrease atomising air pressure
	Split centre	• Increase nozzle diameter • Reduce atomising air pressure • Increase material pressure
	Split centre	• Decrease material pressure • Increase atomising air pressure

5.5 Retooling of Spray Gun

Combinations of air cap, material nozzle and needle, designed to match specific spraying media tpyes and grades, form a unit - namely the nozzle insert assembly. In order maintain the desired spray-finish quality standard always replace the complete nozzle insert assembly.

Warning
Prior to retooling: Make sure that the spray gun is in unpressurized condition, i.e. all air and material inputs must be shut off - if not, imminent risk of injury.

Note
In order to perform the following procedures please use the drawing at the beginning of these operating instructions.

Replacement of Air Cap and Material Nozzle

1. Unscrew the knurled air cap retaining ring in (pos. 1) from the front body (pos. 6).
2. Pull the air cap (pos. 2) of the front body.
3 Unscrew the material nozzle of the front body.
4. Screw the desired material nozzle (if necessary change the air distribution ring) and insert the desired air cap in the front body.
5. Screw the air cap retaining ring in onto the front.

Replacement of Material Needle

1. Unscrew the draw bar (pos. 24).
2. Unscrew the cap (pos. 23) from piston casing (pos. 14).
3. Pull the material needle (pos. 21) out of the piston casing.

Installation of the remaining parts in reverse order.

6 Cleaning

6.1 Safety Warnings

- Prior to any servicing and repair work: Make sure that the spray gun is in unpressurized condition, i.e. all air and material inputs must be shut off - if not, imminent risk of injury.
- No open fires, naked light and smoking allowed in the work area. When spraying readily flammable media such as cleaning solutions, there is an increased risk of fire and explosion.
- Observe the safety warnings issued by the manufacturer. Aggressive and corrosive media represents risks and hazards to personal health.

6.2 Cleaning - Complete

Regular cleaning and lubrication of the spray gun has to be performed, in order to increase the service life and the function of the spray gun.

Clean the gun only with cleaning solutions recommended by the manufacturer of the spraying material used at the time. It is important to make sure that cleaning solutions do not contain any of the following constituents:
- halogenated hydrocarbons
  (e.g. 1,1,1-trichloroethane, methylene chloride, etc.)
- acids and acidiferous cleaning solutions
- regenerated solvents (so-called cleaning dilutions)
- paint removers.

The above constituents cause chemical reactions with the electroplated components resulting in corrosion damage.
WALTHER Spritz-und Lackiersysteme is not responsible for any damages resulting from such treatment.

Clean the spray gun
- prior to each change of the spraying medium.
- at least once a week.
- as often as may be required by the spraying medium handled and the resultant degree of fouling.

Caution
Never immerse the spray gun in solvent or any other cleaning solution. The functional reliability and efficiency of the gun can otherwise not be guaranteed.

Caution
Do not use any hard, pointed or sharp-edged objects when cleaning the spray gun. Any damage of the precision-made parts are likely to affect your spraying results.

1. Dismantle the spray gun in accordance with *5.5 Retooling the Spray Gun.*
2. Use a soft brush together with a compatible cleaning sulotion to clean the air cap and nozzle.
3. Clean the remaining parts and the spray gun body with a suitable cloth and cleaning solution.
4. Apply a thin film of the appropriate grease to the:
   - sealing collar of the piston
   - O-ring of the piston
   - material control needle
   - needle spring

Make sure to use a non-acidic, non-resinogenic grease and a soft brush.

6.3 Cleaning - Routine

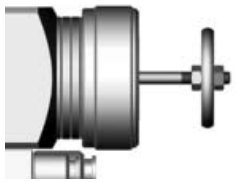
The spray gun need not necessarily be dismantled for cleaning if and when the spraying medium is changed in regular intervals or upon termination of work (depending on the material used).

Note
Clean and lubricate the spray gun frequently in accordance with Chapter *6.2 Cleaning - Complete*. This will ensure functional reliability of the spray gun.

The following requirements must be met before the routine cleaning work can be performed:

1. The material tank must be claen and then be filled with a compatible cleaning aolution. Material pressure has to be available at the spray gun.
   The cleaning solution should not be sprayed.
2. Take the spray gun into operation (see *5.2 Starting the Spray Gun*).
3. Do not stop the spray gun until clear cleaning solution emerges from the nozzle.

The material supply of the PILOT WA 800 - WA 873 can be manually released so that it is not necessary to operate the complete spraying system.



1. Pull back the draw bar of the spray gun. The material inlet is now open and both material duct and material nozzle will be cleaned.

2. Do not let go of the drawbar until clear cleaning solution emerges from the nozzle.

All pressures should then be removed from the complete spraying system until the next operation.

7 Repairs / Replacements

Warning
Prior to any repairs / replacements: Make sure that the spray gun is in unpressurized condition, i.e. all air and material inputs must be shut off - if not, imminent risk of injury.

Note
Please use the drawing at the beginning of these operating instructions to perform the following procedures.

7.1 Replacement of defective Needle Packing

1. Unscrew the front body (pos. 6) and the piston casing (pos. 14) by loosing the two cylinder head screw (pos. 7) from the adaptor plate (pos. 26).
2. 1. Unscrew the draw bar (pos. 24).
3. Unscrew the cap (pos. 23) from piston casing (pos. 14).
4. Pull the material needle (pos. 21) out of the piston casing.
5. Unscrew the front body by loosing the four socket screw (pos. 5) from the piston casing.
6. Unscrew the packing screw (pos. 10).
7. Pull out the needle packing (needle seal pos. 8 and lip seal pos. 9) with an auxiliary tool. Use a strong wire on which one end is bent making a small hook.
8. Lubricate the new needle packing with non-acidic, non-resinogenic grease and install the new needle packing in the front body.

Installation of the remaining parts is performed in reverse order.

Note
Never reinstall a used needle packing (pos. 8+9) as otherwise the functional sealing reliability of the spray gun will suffer.

7.2 Replacement of Nozzles, Needles, Springs and Seals

Dismantle the spray gun in accordance with Chapter *5.5 ReTooling the Spray Gun*, if the following components have to be replaced:
- Material Nozzle
- Pressure of the Piston
- Material Needle*
- Needle Spring*
- Friction ring-gasket**
- O-Ring of the Piston*

Note
Parts marked with * must be lubricated with non-acidic, non-resinogenic grease prior to installation.

WALTHER PILOT repair kits are available for PILOT WA 800 models spray guns including all wearing parts:

Article No.: V 16 800 03 . . 3 (Standard-versions)
Article No.: V 16 820 04 . . 3 (Low pressure-versions)
Article No.: V 16 840 04 . . 3 (Medium pressure-versions)
Article No.: V 16 870 02 . . 3 (Adhesive-versions)

Wearing parts are also shown in the listing of replacement parts (in bold face).

8 Troubleshooting and Corrective Action

Warning
Prior to any servicing and repair work: Make sure that the spray gun is in unpressurized condition, i.e. all air and material inputs must be shut off - if not, imminent risk of injury.

Fault	Cause	Remedy
Gun is dripping	Material nozzle or needle fouled	see 5.5 Retooling the Spray Gun and cleaning
	Material nozzle or needle damaged	see 5.5 Retooling the Spray Gun and replace
	Packing screw too tight	Loosen packing screw in slightly with a screw driver
Gun fails to open	Control air pressure too low	Increaese control air pressure to at least 4.5 bar
Material leaks from leakage boring	Needle packing leaks	see 7.1 Replacing Needle Packing
	Packing screw too loose	Tighten packing screw in slightly with a screwdriver
Spray jet pulsating or unsteady	Level in material tank too low	Top-up material level (see operating instructions of plant systems manufacturer)

9 Disposal of Cleaning / Servicing Substances

Disposal of any such substances must be in accordance with all applicable local and national regulations, directives and laws.

Warning
Pay special attention to all processing specifications and safety warnings issued by the manufacturers of spraying and cleaning media. The improper disposal of any toxic waste material represents a serious threat to the environment, i.e. to the health of mankind and animal life.

10 Specification Data

Nozzle Sizes: 0.5 - 0.8 - 1.0 - 1.2 - 1.4 - 1.5 - 1.8 - 2.0 - 2.2 - 2.5 mm ø

Weight: 990 g

Connections:
Atomizing Air G 1/8 “
Control Air G 1/8 “
Material Inlet G 1/4 “

Pressure Ranges:
Control Air min. 4,5 bar
Material pressure max. 10 bar
Atomizing Air max. 8 bar

max. Operating Temperature of Spray gun 80 °C

Sound Level (measured at a distance of 1 m from the spray gun) 86 dB (A)

Air Consumption

PILOT WA 800-Models		PILOT WA 820-HVLP-Models	
Twelve-bore-air cap		Low-pressure-air cap	
Atomizing air pressure	Air consumption	Air input of the spray gun	Air consumption
1.0 bar	18.0 m^3/h	1.0 bar	12.0 m^3/h
2.0 bar	24.6 m^3/h	2.0 bar	16.2 m^3/h
3.0 bar	29.4 m^3/h	3.0 bar	18.6 m^3/h
4.0 bar	33.0 m^3/h	4.0 bar	21.6 m^3/h
5.0 bar	36.0 m^3/h	**4.5 bar**	**22.8 m^3/h***
6.0 bar	39.0 m^3/h	6.0 bar	26.4 m^3/h

* The atomizing air pressure is 0.7 bar with an air input pressure of 4.5 bar.

Right to effect technical changes reserved.