

WALTHER PILOT

Betriebsanleitung / Operating Instructions /
Instructions de Service / Bedieningshandleiding

D GB F NL

Spritzpistolen / Spray Guns /
Pistolets de Pulvérisation / Smitpistolen

PILOT XIII / PILOT XIII-HVLP
PILOT XIII-D / PILOT XIII-HD

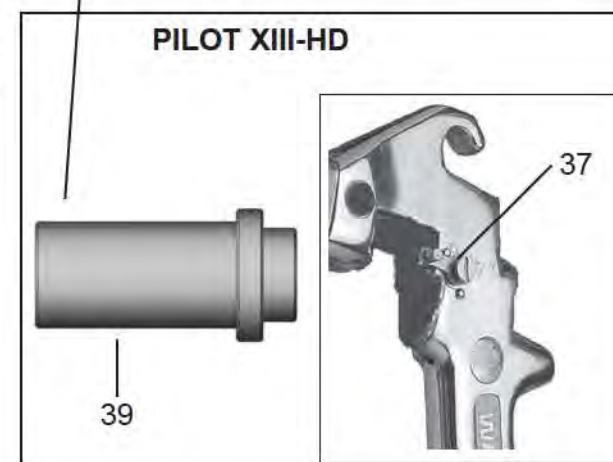
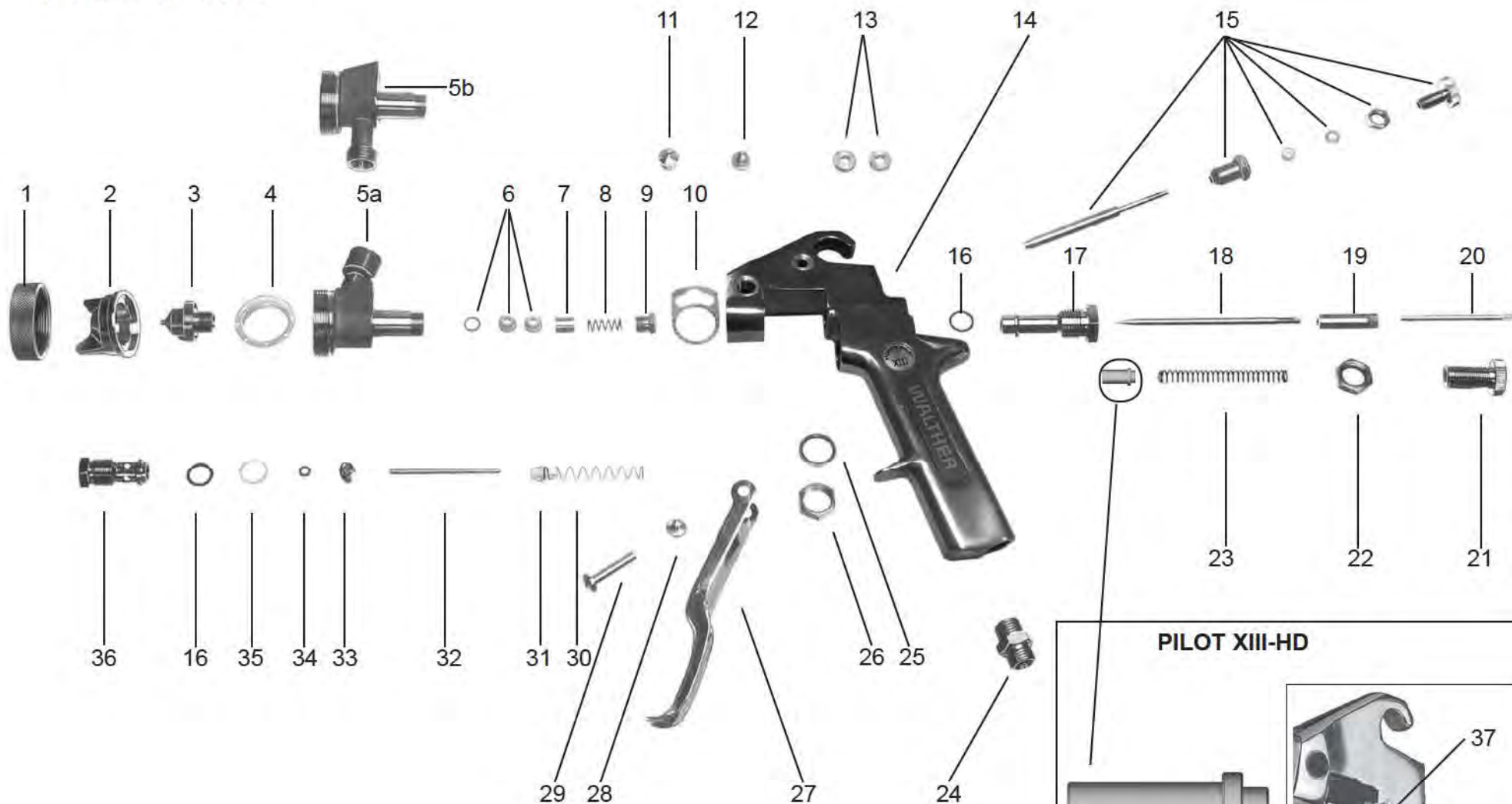


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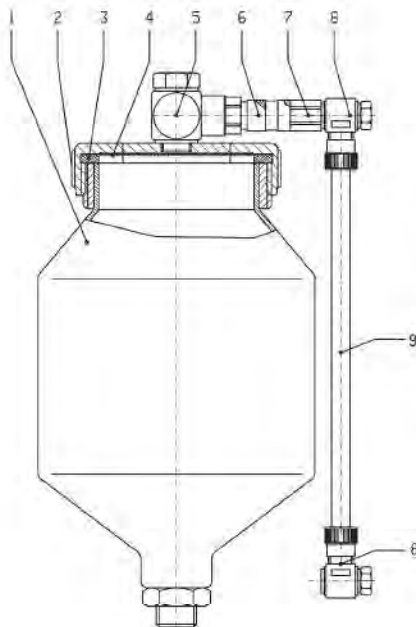


Die Beschichtungs-Experten

PILOT XIII

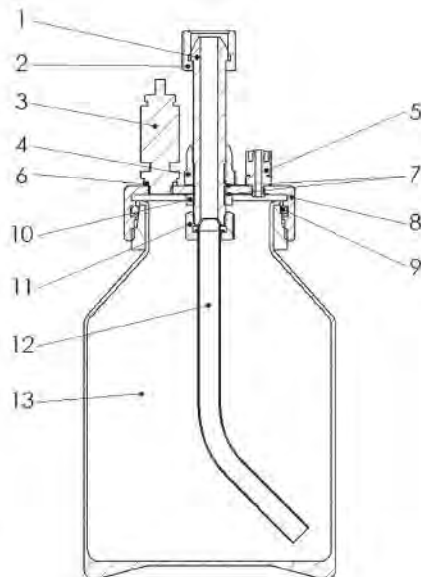


Stand: September 2008



Ersatzteilliste Fließdruckbecher für PILOT XIII-HVLP V 00 138 00 000

Pos. Nr.	Ersatzteil-Nr.	Bezeichnung
1	V 00 137 01 040	Becher
2	V 00 138 02 000	Deckel
3	V 09 002 04 000	Deckeldichtung
4	V 00 138 03 000	Rückschlagplatte
5	V 00 138 04 000	Verschraubung
6	V 00 138 05 000	Kupplung
7	V 00 138 06 000	Stecknippel
8	V 00 138 07 000	L-Verschraubung
9	V 66 100 06 204	Luftschlauch



Ersatzteilliste Hängedruckbecher für PILOT XIII-HVLP V 11 352 60 000

Pos. Nr.	Ersatzteil-Nr.	Bezeichnung
1	V 11 352 55 100	Deckelnippel
2	V 00 142 07 000	Überwurfmutter G 3/8
3	V 11 001 80 510	Sicherheitsventil kompl.
4	V 11 352 56 000	Hutmutter
5	V 66 100 03 562	Schnellverschraubung
6	V 66 100 02 223	Dichtung
7	V 09 101 14 000	Dichtung
8	V 11 352 72 000	Deckel
9	V 09 103 52 000	O-Ring
10	V 00 112 03 005	Sechskantmutter
11	V 00 101 03 000	Überwurfmutter G 1/4
12	V 00 120 03 100	Steigrohr
13	V 11 352 71 000	Hängedruckbecher

Spare Parts List for Gravity Feed Cup PILOT XIII-HVLP V 00 138 00 000

Item No.	Reference No.	Description
1	V 00 137 01 000	Cup
2	V 00 138 02 000	Lid
3	V 09 002 04 000	Lid Seal
4	V 00 138 03 000	Recoil Plate
5	V 00 138 04 000	Joint
6	V 00 138 05 000	Coupling
7	V 00 138 06 000	Adapter Nipple
8	V 00 138 07 000	L-Joint
9	V 66 100 06 204	Air Hose

Liste des pièces de rechange godet gravité pression pour PILOT XIII-HVLP V 00 138 00 000

Pos. Numéro	Description
1	V 00 137 01 000 Godet
2	V 00 138 02 000 Couverture
3	V 09 002 04 000 Joint de couvercle
4	V 00 138 03 000 Plaque de retour
5	V 00 138 04 000 Vis de raccord
6	V 00 138 05 000 Raccord
7	V 00 138 06 000 Nipple de fixation
8	V 00 138 07 000 Coude de raccord
9	V 66 100 06 204 Flexible d'air

Reservdelen voor de stromingsbeker voor PILOT XIII-HVLP V 00 138 00 000

Pos. n	Artikelnr.	Benaming
1	V 00 137 01 000	Beker
2	V 00 138 02 000	Deksel
3	V 09 002 04 000	Dekseldichting
4	V 00 138 03 000	Terugschlagplaat
5	V 00 138 04 000	Schroefverbinding
6	V 00 138 05 000	Koppeling
7	V 00 138 06 000	Insteenknippel
8	V 00 138 07 000	L-koppeling
9	V 66 100 06 204	Lucht slang

Spare Parts List for Gravity Feed Cup PILOT XIII-HVLP V 11 352 60 000

Item No.	Reference No.	Description
1	V 11 352 55 100	Lid nipple
2	V 00 142 07 000	Sleeve nut G 3/8
3	V 11 001 80 510	safety valve compl.
4	V 11 352 56 000	Cap nut
5	V 66 100 03 562	Quick connection
6	V 66 100 02 223	Seal
7	V 09 101 14 000	Seal
8	V 11 352 72 000	Lid
9	V 09 103 52 000	O-ring
10	V 00 112 03 005	Hexagon nut
11	V 00 101 03 000	Sleeve nut G 1/4
12	V 00 120 03 100	Suction pipe
13	V 11 352 71 000	Gravity Feed Cup

Liste des pièces de rechange godet pression pour PILOT XIII-HVLP V 11 352 60 000

Pos. Numéro	Description
1	V 11 352 55 100 Nipple de couvercle
2	V 00 142 07 000 Ecrou-chapeau G 3/8
3	V 11 001 80 510 valve de sécurité compl.
4	V 11 352 56 000 Ecrou à capuchon
5	V 66 100 03 562 Raccord rapide
6	V 66 100 02 223 Joint
7	V 09 101 14 000 Joint
8	V 11 352 72 000 Couvercle
9	V 09 103 52 000 O-ring
10	V 00 112 03 005 Ecrou hexagonal
11	V 00 101 03 000 Ecrou-chapeau
12	V 00 120 03 100 Conduit de refoulement
13	V 11 352 71 000 rechange godet pression

Reservdelen voor de hangdrukbecher voor PILOT XIII-HVLP V 11 352 60 000

Pos. n	Artikelnr.	Benaming
1	V 11 352 55 100	Dekselnippel
2	V 00 142 07 000	Dopmoer G 3/8
3	V 11 001 80 510	veiligheidsklep
4	V 11 352 56 000	Kapmoer
5	V 66 100 03 562	Schroef-snelverbinding
6	V 66 100 02 223	Dichting
7	V 09 101 14 000	Dichting
8	V 11 352 72 000	Deksel
9	V 09 103 52 000	O-ring
10	V 00 112 03 005	Zeskantmoer
11	V 00 101 03 000	Dopmoer G 1/4
12	V 00 120 03 100	Stijgbuis
13	V 11 352 71 000	Hangdrukbecher

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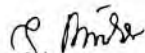
Declaration of CE-Conformity



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 - 2217 www.walther-pilot.de • e-mail: info@walther-pilot.de		
Type Designation	Hand-Held Spray Gun PILOT XIII / XIII-D / XIII-HD PILOT XIII Gravity Feed Cup V 11 301 03 PILOT XIII Material Connection V 11 302 03 PILOT XIII Syphon Feed Cup V 11 303 73 PILOT XIII-D Material Connection V 11 372 51 PILOT XIII-HD Material Connection V 11 342 43 Hand-Held Spray Gun PILOT XIII-HVLP PILOT XIII-HVLP Gravity Feed Cup V 11 336 03 PILOT XIII-HVLP Material Connection V 11 332 03 PILOT XIII-HVLP Pressure Feed Cup V 11 338 03		
Intended purpose	Processing of sprayable media		
Applied Standards and Directives			
EU-Mechanical Engineering Directives 2006 / 42 / EC 94 / 9 EC (ATEX Directives) EN ISO 12100-1 EN ISO 12100-2 DIN EN 1953 DIN EN 1127-1 DIN EN 13463-1			
Specification according 94 / 9 / EC			
Category 2	Part marking		II 2 G c T 6
Tech.File,Ref.: 2412			
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 1st of January 2010

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.

Listing of Replacement Parts PILOT XIII

Item	Part-No.	Description
1	V 01 101 03 000	Air Cap Sleeve Nut
2	optional	Air Cap
	V 01 101 02 . . 6*	
3	optional	Material Nozzle
	V 01 101 07 . . 3*	
4	V 11 301 02 000	Air Distribution Ring
5	optional	Gun Body Attachment
a	V 11 331 02 000	for Gravity Feed Cup
b	V 20 660 02 000	for Versions
		Material Connections /
		Syphon Feed Cup
6	V 09 001 72 000	Needle Seal Packing
		compl.
7	V 20 660 05 000	Mating Bush
8	V 20 660 06 000	Pressure Spring
9	V 20 660 07 000	Compression Gland
10	V 09 001 67 000	Seal
11	V 11 301 18 005	Sealing Plug
12	V 11 335 03 000	Screw Plug
13	V 11 351 02 000	Spacer
14	V 11 301 01 000	Gun Body
15	V 20 660 20 000	Flat Jet Adjustment compl.
16	V 09 102 03 000	O-Ring
17	V 11 306 02 000	Guide Bush
18	optional	Material Needle
	V 11 306 21 . . *	
19	V 10 306 06 000	Driving Sleeve
20	V 10 306 08 000	Counter Screw
21	V 11 306 03 000	Spring Bushing
22	V 11 306 04 000	Lock-Nut
23	V 10 306 04 000	Needle Spring
24	V 00 101 01 000	Double Nipple
25	V 09 002 07 000	Usit-Ring
26	V 20 660 04 003	Hexagon Nut
27	V 11 301 17 000	Trigger
28	V 10 301 09 000	Lever Screw
29	V 11 301 08 000	Lever Shank Screw
30	V 11 304 04 000	Valve Spring
31	V 11 304 02 000	Valve Cone
32	V 11 304 01 000	Valve Shank
33	V 11 304 05 000	Valve Compression Gland
34	V 09 102 08 000	O-Ring
35	V 09 001 68 000	Seal
36	V 11 304 03 000	Valve Casing

* Please quote the required size(s) when ordering replacement parts. We recommend that the parts shown in bold (wearing parts) are held in stock.

Other than the given values of PILOT XIII Listing of Replacement Parts PILOT XIII- HVLP

Item	Part-No.	Description
2	optional	Air Cap
	V 01 101 86 086	for Nozzle Sizes
		0,3 - 2,0 mm ø
	V 01 101 86 256	for Nozzle Sizes
		2,5 + 3,0 mm ø
3	optional	Material Nozzle
	V 01 101 85 . . 3*	
14	V 11 335 01 000	Gun Body
18	optional	Material Needle
	V 11 306 21 033	for Nozzle Sizes
		0,3 mm ø
	V 11 306 21 053	for Nozzle Sizes
		0,5 mm ø
	V 11 306 21 083	for Nozzle Sizes
		0,8 - 1,5 mm ø
	V 11 306 21 123	for Nozzle Sizes
		1,8 - 2,0 mm ø
	V 11 306 21 253	for Nozzle Sizes
		2,5 - 3,0 mm ø

Listing of Replacement Parts PILOT XIII-D

2	optional	Air Cap
	V 20 730 03 . . 2*	for Nozzle Sizes
		6,0 • 7,0 • 8,0 mm ø
3	optional	Material Nozzle
	V 20 730 06 . . 2*	6,0 • 7,0 • 8,0 mm ø
4		Air Distribution Ring not applicable
5	V 20 730 02 003	Gun Body Attachment XIII-D
15	V 09 001 06 000	Seal
	V 11 501 03 000	Compression Gland
18	V 11 370 01 000	Material Needle
19	V 11 370 03 005	Driving Sleeve
20	V 11 370 04 001	Counter Screw

Listing of Replacement Parts PILOT XIII-HD (50 bar)

2	optional	Air Cap
	V 01 101 04 . . 6*	2,0 • 2,5 • 3,0 • 3,5 mm ø
		for Nozzle Sizes
		1,0 • 1,5 • 2,0 • 2,5 mm ø
3	optional	Material Nozzle
	V 01 101 37 . . 3*	1,0 • 1,5 • 2,0 • 2,5 mm ø
17	V 11 340 06 000	Guide Bush
21	V 11 340 05 000	Spring Bushing
22	V 20 206 09 000	Lock-Nut
23	V 11 340 07 000	Needle Spring
37	V 11 680 24 000	Safety Lever Assy
39	V 11 340 04 000	Spring disc

1 General Information

1.1 Identification of Model Version

Models: Hand-Held Spray Gun
PILOT XIII / PILOT XIII-HVLP / PILOT XIII-D PILOT XIII-HD

Type:	PILOT XIII	Gravity Feed Cup	V 11 301 03
	PILOT XIII	Material Connection	V 11 302 03
	PILOT XIII	Syphon Feed Cup	V 11 303 73
	PILOT XIII-HVLP	Gravity Feed Cup	V 11 336 03
	PILOT XIII-HVLP	Material Connection	V 11 332 03
	PILOT XIII-HVLP	Pressure Feed Cup	V 11 338 03
	PILOT XIII-D	Material Connection	V 11 372 51
	PILOT XIII-HD	Material Connection	V 11 342 43

Manufacturer: WALTHER Spritz-und Lackiersysteme GmbH
Kärntner Str. 18-30
D-42327 Wuppertal
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Fax: 00 49 202 / 787-2217
www.walther-pilot.de • Email: info@walther-pilot.de

1.2 Normal Use

The hand-held spray guns PILOT XIII / PILOT XIII-HVLP / PILOT XIII-D / PILOT XIII-HD are designed exclusively for use with sprayable media. Since all parts that are in contact with the spraying media are made from stainless steel, water-soluble or aggressive media may also be used. The following media may be processed:

- Varnish and paint
- Fats/grease, oils and anticorrosive media
- Adhesives
- Ceramic glazes
- Acidic materials
- Mordant agents

If other materials are to be used, please contact WALTHER Spritz- und Lackiersysteme GmbH, Wuppertal.

Sprayable material should only be applied to workpieces or similar objects.

The temperature of the material to be sprayed should at no time exceed 42° C.

The term "normal use" also implies that any and all safety warnings and instructions laid down in this manual have been read, understood and are 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 GmbH must be consulted.

Grounding / Equipotential Bonding

Measures must be taken to ensure that the spray gun is sufficiently grounded (earthed) by means of a conductive air hose (maximum resistance $10^6 \Omega$).

1.3 Improper Use

The spray gun must not be used for purposes other than those laid down in the above section 1.2 *Normal Use*.

Any other form of use is prohibited.

Improper use includes

- the spraying of material on persons and animals;
- the use of liquid nitrogen.

2 Technical Description

PILOT XIII / PILOT XIII-D: Conventional atomisation.

PILOT XIII-HD: High pressure-spraying operation.

PILOT XIII-HVLP: Low pressure spraying operation: The spraying pressure is 0.7 bar with an input pressure of 4 bar.

When the trigger is operated, first the air valve (Item 31) is opened (preliminary air) and only then is the material needle (Item 18) retracted. Closing is performed in reverse order.

The material flow rate depends upon the nozzle diameter and the material pressure set at the pressure tank or the material pressure control. The spray gun PILOT XIII-HVLP is supplied with a gravity feed cup or a pressure feed cup. Through pressurisation of the material in the cup the feeding of material to the valve in relation to the input pressure is secured. Material flow can also be adjusted by screwing in or screwing out the spring bushing (Item 21).

The adjusting screw (Item 15) is used to regulate the contour of the spray jet. By turning the screw to the left (screwing out) the jet becomes flat, by turning it to the right (screwing in) it becomes round.

Versions:

PILOT XIII: Gravity Feed Cup, Syphon Feed Cup, Material Connection for Pressure Tanks and Pump Systems.

PILOT XIII-D: Connection for Pressure Tanks and Pump Systems.

PILOT XIII-HVLP: Gravity Feed Cup, Pressure Feed Cup, Material Connection for Pressure Tanks and Pump Systems.

PILOT XIII-HD: Material Connection for Pressure Tanks and Pump Systems.

3 Safety Instructions

3.1 Safety Warning Symbols



Warning

This pictograph and the accompanying message "**Warning**" indicate possible risks to persons, likely to result in serious and less serious injuries.



Caution

This pictograph and the accompanying message "**Caution**" indicate possible risks to equipment, likely to result in serious and less serious damage.



Note

This pictograph and the accompanying message "**Note**" indicate additional information which will help towards a safe and efficient handling of the spray gun.

3.2 General Safety Instructions

- 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.
- Measures must be taken to ensure that the spray gun is sufficiently grounded (earthed) by means of a conductive air hose (maximum resistance $10^6 \Omega$).
- Before carrying out maintenance or servicing work, always ensure that the air and material feed to the spray gun have been depressurised. 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. 85 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

4.1 Connection of Input Lines



Note

Please refer to the exploded view supplied with this manual when performing the installation steps described on the following pages.



Warning

The air pressure at the gun must not exceed 8 bar; otherwise safe operation of the gun cannot be guaranteed.



Warning

Material and air hoses fastened with a hose nozzle should additionally be secured with a hose clamp.

PILOT XIII: Gravity Feed Cup

1. Connect the air hose to the air pipe (clean compressed air) or to an air purifier and the air inlet of the spray gun (Item 24).
2. Fill the gravity feed cup with screened material.
3. Close the gravity feed cup.
4. Switch on the pneumatic system.

The spray gun is now ready for operation.

PILOT XIII: Syphon Feed Cup

1. Connect the air hose to the air pipe (clean compressed air) or to an air purifier and the air inlet of the spray gun (Item 24).
2. Fill the syphon feed cup with screened material.
3. Close the syphon feed cup and screw it onto the gun attachment (Item 5 b).
4. Switch on the pneumatic system.

The spray gun is now ready for operation.

PILOT XIII-HVLP: Gravity Feed Cup

1. Connect the air hose to the air pipe (clean compressed air) or to an air purifier and the air inlet of the spray gun (Item 24).
2. Fill the gravity feed cup with screened material.
3. Close the gravity feed cup and screw it onto the gun attachment (Item 5 a).
4. If necessary, connect the air hose of the gravity feed cup to the gun body using the L-joint.
5. Switch on the pneumatic system.

The spray gun is now ready for operation.

PILOT XIII-HVLP: Pressure Feed Cup

1. Connect the air hose to the air pipe (clean compressed air) or to an air purifier and the air inlet of the spray gun (Item 24).
2. Fill the pressure feed cup with screened material.
3. Close the pressure feed cup and screw it onto the gun attachment (Item 5 b).
4. If necessary, connect the air hose of the pressure feed cup to the gun body using the L-joint.
5. Switch on the pneumatic system.

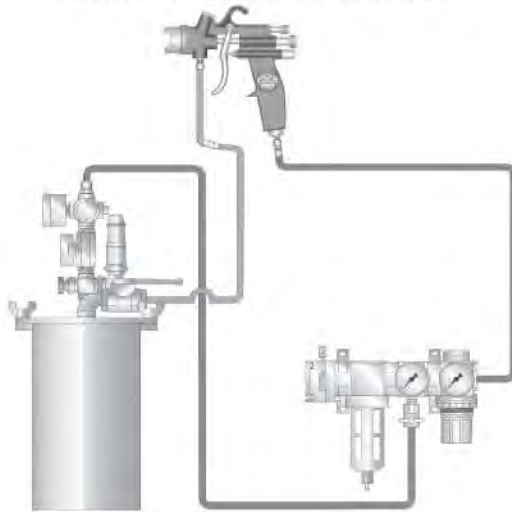
The spray gun is now ready for operation.

PILOT XIII / PILOT XIII-HVLP / PILOT XIII-D / PILOT XIII-HD: Material Inlet for Pressure Tanks or Pump Systems

1. Connect the air hose to the air pipe (clean compressed air) or to an air purifier and the air inlet of the spray gun (Item 24).
2. Switch on the pneumatic system and adjust the atomising air pressure at the reducing valve.
3. Connect the material feed hose to the pressure tank or the material pressure control of a pump system and to the material inlet of the spray gun (Item 5 b).
4. Fill the material pressure tank with material and close the lid.
5. Adjust the desired material pressure at the reducing valve. If the material is fed in via pump systems, the material pressure is adjusted at the material pressure control.
6. Open the material tap at the pressure tank.
7. To let the air in the material hose escape, actuate the trigger (Item 27), until a uniform jet emerges from the nozzle. Now close the spray gun again.

The spray gun is now ready for operation.

Connection Diagram for Pressure Tanks



5 Operation

5.1 Safety Instructions

Please pay special attention to the following safety instructions when using the spray gun!

- Be sure to wear the required respiratory protection masks and protective overalls whenever you are operating the spray gun. Airborne particles represent a health hazard.
- Be sure to wear suitable ear protection. The spray gun produces sound levels of approx. 85 dB (A).
- No open fires, naked lights or smoking in the working area. The spraying of readily inflammable media (e.g. varnish, adhesives etc.) is accompanied by an increased risk of fire and explosion.

5.2 Requirements at the Start and Finish of Operation

The following requirements must be met before the spray gun is operated:

- The atomising air pressure must be available at the gun
- The material pressure must be available at the gun (not applicable with gravity feed cups, pressure feed cups).



Caution

The material pressure should not exceed 8 bar (except PILOT XIII-HD). The air pressure should not exceed 8 bar, since otherwise the operational reliability of the spray gun will be impaired. The material pressure in the cup should not exceed 3 bar.



Warning

It is important to remember to relieve the spray gun of all pressures when work is terminated. Lines left under pressure may burst and the released material may injure any persons in the vicinity.

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 maintenance or repair works.
- The spray pattern is best tested using a workpiece sample, a sheet of metal, cardboard or paper.



Warning

Keep your hands or other parts of the body away from the front of the spray gun - imminent risk of injury.



Warning

Make sure that no other people are in the spraying zone when the spray gun is started - imminent risk of injury.

1. Start the gun to produce a spray pattern sample (see 5.2 *Requirements at the Start and Finish of Operation*).
2. Inspect the sample and, if necessary, adjust the settings of the gun (see 5.4 *Spray Pattern Adjustment*).

5.4 Spray Pattern Adjustment

The spray pattern of the PILOT XIII / the PILOT XIII-D / PILOT XIII-HVLP and the PILOT XIII-HD can be adjusted as follows:

Round or Flat Jet

The adjusting screw (Item 15) is used to regulate the spray jet contour. By turning the screw to the left (screwing out) the jet becomes flat, by turning it to the right (screwing in) it becomes round. This function is not applicable at PILOT XIII-D.

Adjusting the Material Flow Rate

The material flow rate can be adjusted at the regulating screw (Item 21). Turning it to the left (screwing out) results in an increase of material, turning it to the right (screwing in) decreases the material flow.

Adjusting the Material Pressure (Version for Material Connection)

The material pressure can only be adjusted at the pump or the pressure tank. Please follow the operating instructions and safety instructions issued by the manufacturers.

Adjusting the Atomising Air Pressure

The atomising air pressure is adjusted at the air pressure reducing valve of the compressor system. Please follow the operating instructions and safety instructions issued by the manufacturers.

5.5 Retooling the Spray Gun

If a jet contour other than those already described is desired, the spray gun has to be retooled.

WALTHER offers a wide range of combinations of air caps, material nozzles and needles.

Air cap, material control nozzle and needle packing together form a unit - the nozzle insert assembly. Always change the complete insert assembly to maintain the desired spray finish quality.



Warning

Air and material inputs must be shut off prior to retooling - risk of injury.



Note

Please refer to the exploded view at the beginning of this manual to perform the steps detailed below.

Replacement of Material Nozzle and Air Cap

1. Unscrew the air control sleeve nut (Item 1).
 2. Remove the air control head (Item 2).
 3. Remove the material nozzle (Item 3) from the gun body, using wrench SW 12.
- Reassembly is performed in reverse order.

Replacement of Material Needle

1. Unscrew the adjusting screw (Item 21).
 2. Remove the spring (Item 23).
 3. Remove the material needle (Item 18) from the gun body.
- Reassembly is performed in reverse order. The distance between the tip of the material needle and the driving sleeve (Item 19) should be 82 mm.

Only for the model PILOT XIII-D:

After the remove of the nozzle and air cap unscrew the material needle from the the driving sleeve.

5.6 Correction of Spray Pattern Imperfections

The following table shows how to correct a defective spray pattern.

 Desired Spray Pattern		
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
	Spray pattern is very spherical	• Reduce material pressure • Increase nozzle air pressure

6 Cleaning and Maintenance

6.1 Safety Instructions

- Prior to any service work atomising air as well as material feed to the spray gun should be shut off - risk of injury.
- Open fires, naked lights and smoking are prohibited in the working area. There is an increased risk of fire and explosion, when spraying readily flammable media, such as cleaning solutions.
- Follow the safety instructions issued by the manufacturers of the cleaning media. Aggressive and caustic cleaning agents in particular represent health hazards.

6.2 General Cleaning Procedure

The spray gun should be frequently cleaned and lubricated to ensure reliable operation and long life.



Caution

Never immerse the spray gun in solvents or other cleaning fluids as this will impair the functional reliability and efficiency of the gun.



Caution

Do not use any hard or sharp-pointed objects when cleaning the spray gun, as the precision-made parts can easily be damaged and are likely to affect your spraying results.

Only use cleaning solutions recommended by the manufacturer of the spraying material. These solutions should not contain any of the following constituents:

- halogenated hydrocarbons (e.g. 1,1,1-trichloroethane, methylene chloride etc.)
- acids and acidic cleaning solutions
- regenerated solvents (so-called cleaning dilutions)
- paint removers.

These constituents cause chemical reactions with electroplated components resulting in corrosion damage.

WALTHER Spritz-und Lackiersysteme GmbH is not liable for any damages resulting from improper treatment of the gun.

The spray gun should be cleaned

- at least once a week
- as often as necessary in a week depending on the spraying medium used and the resulting level of soiling.

1. Dismantle the gun as described in section 5.5 *Retooling the Spray Gun*.
2. Clean the air control head and nozzle with a brush dipped in the recommended cleaning solution.
3. Clean the gun body and all remaining parts with a soft cloth and the recommended cleaning solution.
4. Apply a thin layer of grease to the following parts:
 - Material needle
 - Needle Spring
 - All sliding parts and bearings.
 - The moveable inner parts should be greased at least once a week.
 - The springs should at all times be coated with a thin layer of grease.

Use non-acidic, non-resinogenic grease and a brush. The spray gun is then reassembled in reverse order.

6.3 Routine Cleaning

It is not always necessary to dismantle the spray gun for cleaning purposes when the material is changed or at the end of a work period.

For routine cleaning purposes please observe the following steps:

1. Fill the cleaned gravity feed cup/syphon feed cup/pressure feed cup or the cleaned material pressure tank with a cleaning medium compatible with the material processed.
2. Start the spray gun (see 5.2 *Requirements at the Start and Finish of Operation*).
3. Do not stop the gun until only clear cleaning solution emerges from the nozzle.

The complete spraying system should stay depressurised until the gun is used again.

7 Repairs / Replacements



Warning

Control and atomising air as well as material inputs must be shut off prior to retooling - risk of injury.



Note

Please refer to the exploded view at the beginning of this manual to perform the steps detailed below.

7.1 Replacement of Defective Needle Seal Packing

1. Remove the material needle (see 5.5 *Retooling the Spray Gun*).
2. Unscrew the compression gland (Item 9) from the gun body.
3. Remove the needle seal packing (Item 6) (Use a thin wire, one end of which is bent into a hook, for this purpose).

Reassembly of replacement parts is performed in reverse order.



Note

The needle seal packings which have been removed from the gun should not be re-used, since the sealing properties may be impaired.

7.2 Replacement of Material Nozzle, Needles and Seals

Dismantle the spray gun in accordance with 5.5 *Retooling the Spray Gun*:



Note

All moveable and sliding parts should be lubricated with a non-acidic, non-resinogenic grease prior to assembly.

Repair Kit:

A repair kit is available from WALTHER for the hand-held spray gun PILOT XIII containing a set of all wearing parts. In the parts list all wearing parts are printed in bold.

Item No. Repair Kit: V 16 013 03 . . 3

Repair Kit:

A repair kit is available from WALTHER for the hand-held spray gun PILOT XIII-HVLP containing a set of all wearing parts. In the parts list all wearing parts are printed in bold.

Item No. Repair Kit: V 16 014 03 . . 3

8 Troubleshooting



Warning

Prior to any servicing and repair work the spray gun should be inunpressurised state, i.e. all control air and atomising air pressure as well as all material inputs must be shut off - risk of injury.

Fault	Cause	Remedy
Gun is dripping	Material nozzle or needle is clogged	Remove material needle or nozzle and clean
	Material needle or nozzle is damaged	Replace material needle or nozzle
	Foreign body in material nozzle	Remove nozzle and clean
	Compression gland (Item 9) too tight	Loosen slightly
	Needle spring (Item 23) defective, maybe broken	Remove material needle and replace spring
	Adjusting screw (Item 21) turned too far back	Tighten adjusting screw (to the right)
Pulsating or unsteady jet	Level in material tank too low	Top-up material level (cf. Manufacturer's instructions)
	Pressure feed cup or gravity feed cup tilted too much	Keep it level
	Material nozzle (Item 3) loose or damaged	Tighten, maybe replace air distribution ring (Item 4)
Air leakage at gun head, gun keeps blowing when in off-position	Valve cone (Item 31) leaking	Remove and replace
	Valve shank (Item 32) sluggish	Remove and replace
Material leaking at compression gland (Item 9)	Gland not tight enough	Tighten
	Needle packing (Item 6) worn	Replace needle packing
Spray jet one-sided	Horn boring soiled at air cap	Remove and clean

9 Disposal of Cleaning and Servicing Substances

The disposal of substances used for cleaning and servicing should be in accordance with local, national and international laws and directives.



Warning

Particular attention should be paid to the spray and cleaning media manufacturers' instructions. Improper disposal represents a serious threat to the health of humans and animals.

10 Specifications

PILOT XIII / PILOT XIII-HVLP / PILOT-XIII D / PILOT XIII-HD

Net Weight:	725 g
Nozzle Sizes Available:	0.8 • 1.0 • 1.2 • 1.3 • 1.5 • 1.8 • 2.0 • 2.5 • 3.0 • 3.5 mm ø
Nozzle Sizes for PILOT XIII-D:	6.0 • 7.0 • 8.0 mm ø
Nozzle Sizes for PILOT XIII-HD:	1.0 • 1.5 • 2.0 • 2.5 mm ø
Air Cap:	
Standard Air Cap PILOT XIII:	6-Bore-Air Cap
Air Cap for PILOT XIII-HVLP:	Low Pressure Air Cap
Air Cap for PILOT XIII-D:	Round Jet Air Cap
Air Cap for PILOT XIII-HD:	Rotary Jet Air Cap
Pressure Ranges:	
Max. Atomising Pressure	
PILOT XIII / XIII-D / XIII-HD:	8 bar
PILOT XIII-HVLP:	0.7 bar (with an input pressure of 4 bar)
Max. Material Pressure:	8 bar
Max. Material Pressure PILOT XIII-HD:	50 bar
Max. Operating Temperature of Spray Gun:	42° C
Noise Level (measured at a distance of ca. 1 m from spray gun):	85 dB (A)

Right to effect technical changes reserved.

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
- Pulverbeschichtungs-Systeme
- Trockner
- Zuluft-Systeme
- Atemschutzsysteme und Zubehör

D

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
- Powder Coating Systems
- Dryers
- Ventilation Systems
- Protective Respiratory Systems and Accessory Items

GB

Le Programme de WALTHER PILOT

- Pistolets de pulvérisation manuels
- Pistolets de pulvérisation automatiques
- Pistolets de pulvérisation (Système HVLP)
- Installations de marquage
- Pistolets de pulvérisation à deux composants
- Récipients de mélange et de stockage
- Appareils de pulvérisation sans air
- Pompes de transfert
- Murs à aspiration sèche
- Murs à rideau d'eau
- Systèmes de poudre
- Cabines mixtes peinture-séchage
- Installations de soufflage
- Etuves
- Très nombreux accessoires

F

Het WALTHER PILOT-programma

- Handbediende spuitpistolen
- Automatische spuitpistolen
- Lagedruk-spuitpistolen (systeem HVLP)
- Tweecomponenten-spuitpistolen
- Materiaalreservoirs
- Drukloze reservoirs
- Roersystemen
- Airless-toestellen en vloeistofpompen
- Materiaalrondpompsystemen
- Gecombineerde spuit- en droogboxen
- Afzuigsystemen met droogafscheiding
- Afzuigsystemen met natafscheiding
- Poederspuiters
- Drogers
- Luchttoevoersystemen
- Adembeschermingssystemen en toebehoren

NL



Die Beschichtungs-Experten

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