

Product Description
Safety Instructions
Operating Instructions
for
BINKS
Airless Spray Gun HAP 50

These operating instructions are part of the equipment. Please read and follow all instructions and safety precautions before using the equipment. Disregarding can causes injuries on people and/or damages on the unit.

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High Pressure Spray Gun HAP 50 D and HAP 50 F



Very tough Airless Manual Spray Gun with 4-finger pull. With wear resisting shut-off valve made of hard metal. Material inlet at the bottom of the gun handle = swivel joint 1/4" NPS (M).

Suitable for waterborne coatings. A fluid strainer can be integrated into the gun handle (see accessories).

Maximum pressure up to 500 bar.

Order No. 0114-013514

(Please order tip and base separately – see selection chart)



Very tough Airless Manual Spray Gun with 4-finger pull. With wear resisting shut-off valve made of hard metal. Material inlet at the top of the gun body = swivel joint 1/4" NPS (M).

Suitable for waterborne coatings.

Maximum pressure up to 500 bar.


Order No. 0114-014930


(Please order tip and tip base separately – see selection chart)

Safety Precautions

The Airless Spray Gun HAP 50 corresponds to state-of-the-art technology and meets with the general requirements of EC Rules. This is documented by the attached EC Declaration of Conformity and the CE mark.

The High Pressure Gun HAP 50 was designed according to state-of-the-art technology. The gun was tested and operationally reliable prior to leaving our plant. The tip grip protection which is a component of the operational safety has to be ordered separately.


	If you are injected, seek emergency medical treatment immediately. Be familiar with the name of the fluid in use. Do not delay surgical treatment !
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	Electrostatic Arcing must be prevented
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Electrostatic charging develops at high flow rates. An adequate grounding system at the total Airless System is securely deriving the charges. When working with flammable materials all high pressure Airless Systems must be grounded.


	Ignition Sparks / Explosion Hazard
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Always use a conductive hose for Airless spraying operations. Check hose and gun for continuity. Take an ohmmeter for weekly checks. The resistance between gun/hose (end/end) must not read greater than 29 M Ω verified at depressurized hose.


	Ensure that all Airless Pumps are properly grounded !
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The gun is suitable for all customary and standard coating materials.

	Never leave a pressurized spray gun unattended !
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	Only use coating materials that are compatible with Nylon hoses !
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	Check regularly for leaks and wear of hoses and hose connections. Never repair hoses, always replace them !
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	Please pay particular attention to safety information of the material suppliers !
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	Always take pressure off prior to working on spray equipment ! (e.g. by means of a by-pass valve or by pulling the trigger)
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Only use genuine BINKS replacement parts for Airless spray equipment!
The use of other than BINKS parts void all warranties !

In case you wish to apply unknown strong acids or aluminum corroding materials, we recommend to contact your local distributor or our company to ensure safe operation.

Because any tool, if used improperly, can be dangerous, safety is ultimately the responsibility of those who use it and those who operate the equipment. It is important that prior to installation the user must read and be familiar with the Safety Section in the manual.

Always keep the Service Manual to hand.

Legal Requirements

For the operation with Airless Equipment and Accessories users must comply with the following legal requirements:

BGV D 25 (VBG 23)	Processing of coating material
BGV D 15 (VBG 87)	Working with liquid jet stream equipment
ZH 1/406	Rules for jet stream equipment

Safeguards to be followed:



Do not point the gun at any person !

Do not point the gun at yourself, at any person, or at any animal.



Do not place any part of the body in the path of the spray !

Never touch the path of the spray with your fingers or your hand.



Secure the spray gun !

Always lock the gun before assembling or disassembling the tip or at operating interruptions.
Ensure no unintentional triggering may occur.

Gun Design

The gun is of a very tough design, however it must not be used as a tool, e.g. to close drums.

The Airless Spray Gun HAP 50 is designed for a maximum operating pressure of 500 bar. It comes standard with a swivel joint.

Order No. 0114-013514 for material inlet at the bottom of the gun handle, Type HAP 50 D.

Order No. 0114-014930 for material inlet at the top of the gun body, Type HAP 50 F.

The equipment can be connected to an Airless pump with a maximum operating excess pressure of 500 bar.

The shut off valve of the gun is made of nickel bound hard metal and very wear resisting.

The gun having the material inlet at the bottom of the gun handle is equipped with a fluid strainer (option), which is filtering coarse particles of the coating material.

Plug-in strainers are available in various mesh sizes.



Selection Chart for Strainers


Mesh	Color	Order No.	Material	Recommended for Tip Ø
200	red	00-00-0001320 (qty. of 10)	caustic agent, clear lacquer, artificial resin, translucent ink, oil	< 0,33 mm
100	yellow	00-00-0001319 (qty. of 10)	basic coat, decorative paint, filler, undercoat, primer, water dilutable paint	0,38 to 0,43 mm
50	white	00-00-0001318 (qty. of 10)	Dispersion paint, acrylic enamel, filler, Latex	> 0,46 mm

Strainer Replacement – Disassembly (also refer to Exploded View)

- Loosen trigger guard (20) and screw (22).
- Unscrew gun handle (32) from gun body (10) by turning counter clockwise. Use wrench added.
- Pull down plug-in strainer from gun body (10).
- Clean and check gasket (33), replace if necessary.
- Rinse gun handle (32) with solvent or clear water.
- Clean and brush strainer with solvent or clear water.
- Insert strainer into gun body.
- Reassemble gasket (33).
- Screw gun handle (32) into gun body and tighten with wrench added.

Selection Chart for Spray Tips

 Standard Tips	 Super ZIP Tips	Bore mm	Fan Width mm	Fan Angle	Flow Rate approx. ltrs. Water/min. at	
					70 bar	100 bar
94-98-0030023		0,23	134	30°	0,13	0,29
94-98-0040023		0,23	182	40°	0,13	0,29
94-98-0060023		0,23	289	60°	0,13	0,29
94-98-0040028	90-98-0059411HP	0,28	182	40°	0,2	0,45
94-98-0050028		0,28	233	50°	0,2	0,45
94-98-0060028		0,28	289	60°	0,2	0,45
94-98-0040033		0,33	182	40°	0,31	0,68
94-98-0050033		0,33	233	50°	0,31	0,68
94-98-0060033		0,33	289	60°	0,31	0,68
94-98-0030038		0,38	134	30°	0,39	0,87
94-98-0040038		0,38	182	40°	0,39	0,87
94-98-0050038		0,38	233	50°	0,39	0,87
94-98-0060038		0,38	289	60°	0,39	0,87
94-98-0030043		0,43	134	30°	0,52	1,05
94-98-0040043	90-98-0059417HP	0,43	182	40°	0,52	1,05
94-98-0050043		0,43	233	50°	0,52	1,05
94-98-0060043	90-98-0059617HP	0,43	289	60°	0,52	1,05
94-98-0040053	90-98-0059421HP	0,53	182	40°	0,79	1,76
94-98-0050053	90-98-0059521HP	0,53	233	50°	0,79	1,76
94-98-0060053	90-98-0059621HP	0,53	289	60°	0,79	1,76
94-98-0040063	90-98-0059425HP	0,63	182	40°	1,09	2,4
94-98-0050063	90-98-0059525HP	0,63	233	50°	1,09	2,4
94-98-0040078	90-98-0059431HP	0,78	182	40°	1,53	3,28
94-98-0050078		0,78	233	50°	1,53	3,28
94-98-0050094	90-98-0059537HP	0,94	233	50°	1,82	3,91
94-98-0060094		0,94	289	60°	1,82	3,91

 Adjustable Spray Tips	Tip Bore mm	Fan Width mm
JACT-415	0,13-0,46	30-350
JACT-420	0,18-0,48	30-500
JACT-424	0,18-0,66	30-350
JACT-428	0,28-0,66	30-550
JACT-441	0,44-0,89	30-600
JACT-449	0,53-1,36	30-650

Tip Grip Protection for High Pressure Guns

According to CE-Rule PR EN 1953 all guns of Airless equipment must be equipped with a contact proof device in order to avoid injections.

Please order the tip grip protection (tip base) separately.

Accessories

Standard Spray Tip -	Order No. 94-98-00... (for size see selection chart)
Adjustable Tip -	Order No. JACT-... (for size see selection chart)
Super ZIP Tip -	Order No. 90-98-0059... (for size see selection chart)
Tip base for Standard Tip -	Order No. 0114-016020
Tip base for adjustable tips -	Order No. 93-98-541-300
Tip base Super ZIP -	Order No. 90-98-5901HPF
Filter 200 mesh, red (qty. of 10) -	Order No. 00-00-0001320
Filter 100 mesh, yellow (qty. of 10) -	Order No. 00-00-0001319
Filter 50 mesh, white (qty. of 10) -	Order No. 00-00-0001318
Kit of gaskets (Pos. 2,5,6,8,31,33,34) -	Order No. 0114-013559
Repair kit (Pos. 1,2,3,5,6,8,31,33,34) -	Order No. 0114-013560
Tool Kit (hex wrench, multi purpose wrench, pull-off ring) -	Order No. 0114-018490
Cleaning Brush -	Order No. 82-469
Metering and Mixing Cup (qty. of 50) -	Order No. MC-1-K50
Viscosity measuring cup DIN4 (qty. of 2) -	Order No. 7000-114-K2
Hand cleaner towels SCRUBS (6 buckets of 72 towels each) -	Order No. 192218-K6
Tip cleaning needle (qty. of 12) -	Order No. JAC-90-D
Gun oil, silicone-free (bottle of 75 ml) -	Order No. 6-428
Gun grease, silicone-free (tube of 50 g) -	Order No. AGMD-010

Gun Connection



Ensure the maximum operating excess pressure generated by the pump does not exceed the maximum operating excess pressure of the gun !

If the maximum operating excess pressure of the equipment exceeds the one of the gun, the gun must not be connected.

Once this has been checked the procedure will be as follows:

- Connect high pressure hose of the equipment to swivel (30) of the gun. Check for tight connection.
- Insert tip into tip grip protection.
- Insert washer.
- Tighten tip grip protection using a wrench.
- If you are using a turning tip like Super ZIP or similar, check its allowed operating excess pressure and install according to installation instructions.
- Start initial setup procedure of the pump according to the pump Service Manual.
- Refer to all operating and safety precautions of this service manual and of the pump manual.

Application Technique

When spraying try to keep the gun HAP 50 parallel to the target. Twisting your wrist or arcing will make the coating irregular. The gun must be hold with the whole arm.

The BINKS Airless Spray Gun has been factory tested. The unit comes assembled except for the selected tip which must be installed. We recommend, however, to perform the following steps:

1. Start the pump slowly without spray tip and circulate the fluid, so that air may escape off the system.
2. Release the trigger, put in trigger guard, and install the spray tip.
3. Increase the pump pressure and check spray pattern for proper atomization.



Unnecessary high pressure will result in premature wear of parts !

4. Keep the gun approximately 20 to 36 cm from the target.
5. If the fluid pressure is too high or the tip is obstructed or damaged this will cause a heavy pattern on top or bottom.
6. If the fluid pressure is too low, or the fluid has a higher viscosity, or you are using the wrong tip this will cause stripes or a faulty pattern.
7. Airless guns are either at the "ON" or "OFF" position. Intermediate positions known at conventional air atomizing guns are not possible.
8. With Airless spraying there will be a heavier material build up at the sides. Therefore, the overlap can be kept small.
9. Due to the high fluid flow the spray courses have to be performed quicker than with air atomizing guns.

Important: Shut the gun at each change of direction. If the spray pressure is too low and/or the tip is too large and/or the viscosity is too high this will cause stripes at the edges. In order to avoid a pattern with stripes at the edges increase the pressure, use a smaller tip, or dilute the material.

Cleaning and Maintenance Procedures

Always remove the spray tip before flushing the Airless system. At the same time let the pump run at lowest possible pressure.

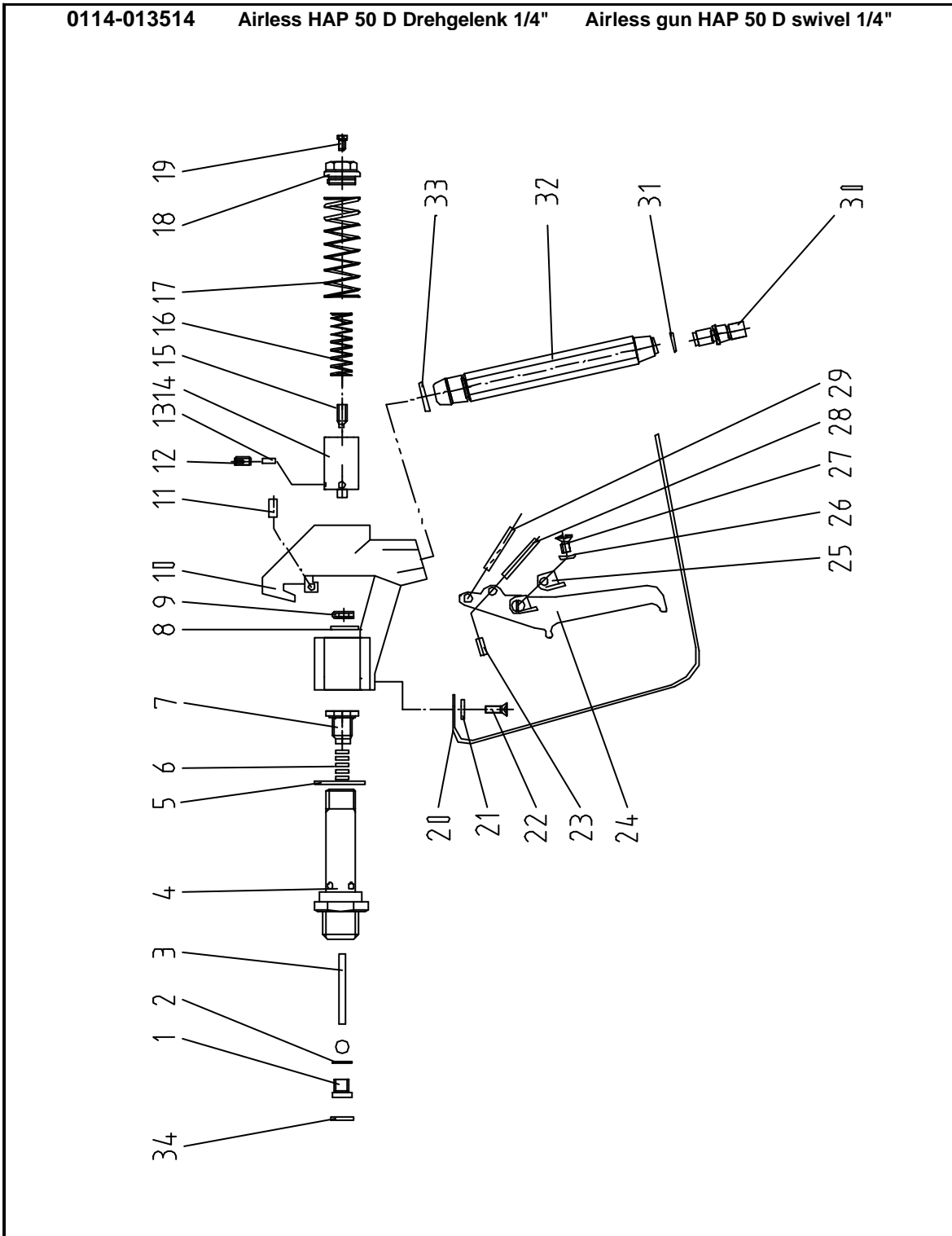
The gun should be thoroughly flushed through with an appropriate solvent after use. In order to avoid sticking of the valve stem to the packing rinse again with turpentine substitute.

In order to avoid sticking of the valve needle perform the following: Pull back the trigger of the completely relieved gun and lubricate the needle with a single drop of non-resinous, silicone-free oil from time to time.

Clean the gun filter depending on the material used either with solvent or water and a hard brush. Never use a steel brush.

Ersatzteile / spare parts HAP 50 D

Pos.	Bestell Nr. Order no.	Bezeichnung	Description
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Vorbehaltlich technischer Änderungen

Ersatzteilliste / spare parts list

Ersatzteile / spare parts HAP 50 D

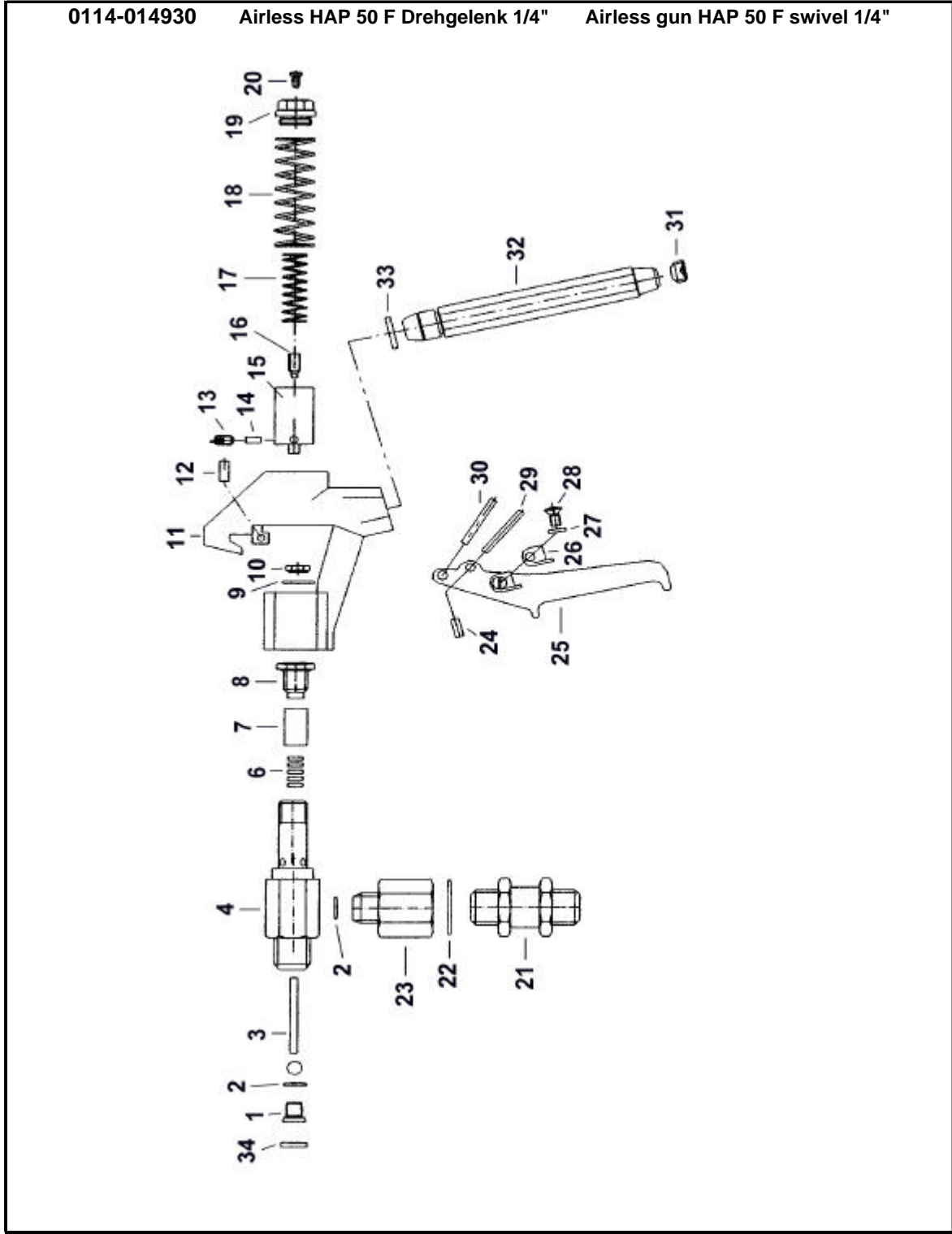
Pos.	Bestell Nr. Order no.	Bezeichnung	Description		D / R
	0114-013514	Airless HAP 50 D Drehgelenk 1/4"	Airless gun HAP 50 D swivel1/4"		
1	0114-013612	Ventilsitz	valve seat	V	/1
2	0114-013825	Dichtung	gasket	V	1 / 1
3	0114-014051	Ventilnadel	valve needle	V	/1
4	0114-013759	Einsatz	insert		1
5	0114-013823	Dichtung	sealing	V	1 / 1
6	0114-013615	Packung kpl.	packing cpl.	V	1 / 1
6.1	0114-014093	Manschette PTFE	packing ring		1
6.2	0114-013971	Manschette PTFE	packing ring		3
6.3	0114-014094	Manschette PTFE	packing ring		1
7	0114-013770	Stopfbuchenschraube	packing screw	V	1
8	0114-013835	Dichtung	gasket	V	1 / 1
9	0114-013771	Mutter	nut		1
10	0114-013764	Pistolenkörper kpl.	body gun assembly		1
11	0114-013853	Lagerhülse	sleeve		1
12	0114-014190	Gewindestift	threaded pin		1
13	0114-013775	Druckstopfen	pressure plug		1
14	0114-013774	Führungshülse	guide sleeve		1
15	0114-013778	Ansatzschraube	screw		1
16	0114-014072	Druckfeder	spring		1
17	0114-014067	Druckfeder	spring		1
18	0114-013762	Verschlussschraube	screw		1
19	0114-014169	Schraube	screw		1
20	0114-014108	Sicherheitsbügel	trigger guard		1
21	0114-014167	U-Scheibe	washer		1
22	0114-014166	Schraube	screw		1
23	0114-014689	Rolle	pressure roll		1
24	0114-013639	Abzughebel	trigger lever		1
25	0114-014111	Sicherungshebel	trigger guard		1
26	0114-014172	Federscheibe	elastic washer		1
27	0114-014076	Ansatzschraube	threaded pin		1
28	0114-014688	Achse unten	axle		1
29	0114-013852	Achse oben	axle		1
30	0114-013579	Drehgelenk 1/4"	swivel 1/4"		1
31	0114-013830	Dichtung	gasket		1
32	0114-013844	Griff	handle		1
33	0114-013845	Dichtung	gasket	V	1 / 1
34	0114-013836	Dichtung	gasket	V	1 / 1
	0114-013559	Dichtungssatz	set of sealing		D
	0114-013560	Reparatursatz	repair set		R
		Verschleißteil	wearing part	V	

Ersatzteilliste / spare parts list



Ersatzteile / spare parts HAP 50 F

Pos.	Bestell Nr. Order no.	Bezeichnung	Description
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Vorbehaltlich technischer Änderungen

Ersatzteile / spare parts HAP 50 F

Pos.	Bestell Nr. Order no.	Bezeichnung	Description		D / R
	0114-014930	Airless HAP 50 F Drehgelenk 1/4"	Airless gun HAP 50 F swivel 1/4"		
1	0114-013612	Ventilsitz kpl.	valve seat cpl.	V	/ 1
2	0114-013825	Dichtung	gasket	V	2 / 2
3	0114-014100	Ventilnadel kpl.	valve needle cpl.	V	/ 1
4	0114-013859	Einsatz	insert		1
6	0114-013615	Packung kpl.	packing assembly	V	1 / 1
7	0114-013868	Distanzhülse	spacer sleeve		1
8	0114-013770	Stopfbuchsen-schraube	packing screw	V	1
9	0114-013835	Dichtung	gasket	V	1 / 1
10	0114-013771	Mutter	nut		1
11	0114-013764	Pistolenkörper	body gun assembly		1
12	0114-013853	Lagerhülse	sleeve		1
13	0114-014190	Gewindestift	threaded pin		1
14	0114-013775	Druckstopfen	pressure plug		1
15	0114-013774	Führungshülse	guide sleeve		1
16	0114-013778	Ansatzschraube	screw		1
17	0114-014072	Druckfeder	spring		1
18	0114-014067	Druckfeder	spring		1
19	0114-013762	Verschlußschraube	screw		1
20	0114-014169	Schraube	screw		1
21	0110-017257	Drehgelenk 1/4"	swivel 1/4"		1
22	00-00-0002245	Cu-Dichtring	cu-ring		1
23	0114-013435	Reduzierung	reduction		1
24	0114-014689	Rolle	roll		1
25	0114-013639	Abzughebel	trigger lever		1
26	0114-014111	Sicherungshebel	safety lock		1
27	0114-014172	Federscheibe	spring ring		1
28	0114-014076	Ansatzschraube	screw		1
29	0114-014688	Achse unten	axle		1
30	0114-013852	Achse oben	axle		1
31	0114-013870	Ansatzschraube	screw		1
32	0114-013844	Griff	handle		1
33	0114-013845	Dichtung	gasket	V	1
34	0114-013836	Dichtung	gasket	V	1/1
	0114-013549	Dichtungssatz	seal kit		D
	0114-013561	Reparatursatz	repair kit		R
		Verschleißteil	wearing part	V	

vorbehaltlich technischer Änderungen

EC Declaration of Conformity

We: ITW Oberflächentechnik GmbH & Co. KG
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Germany

As the representative/manufacturer of the items listed below:

High-Pressure Spray Gun Model BINKS

HAP 50

Declare, under our sole responsibility, that the equipment to which this document relates is in conformity with the following standards or other normative documents:

EN 292 1-2, EN 1953, EN 12621, EN 13463 1-8:2001

And thereby conform to the protection requirements of Council Directive 89/392/EEC relating to ***Machinery Safety Directive*** and council Directive 94/9/EC relating to ***Equipment and Protective Systems intended for use in Potentially Explosive Atmospheres protection level II 2 G X***.

Issued on: 10/07/03

Authorised by:

A handwritten signature in black ink, appearing to read 'H. de Wap'.

General Manager