

Spray Gun PN 1 / PN 1A

Operating Manual

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Konformitätserklärung Declaration of conformity

Hiermit erklären wir, dass die
We declare herewith that the

NIEDERDRUCKSPRITZPISTOLE (PN 1 / PN 1A)
HVLP SPRAY GUN (PN 1 / PN 1A)

Gemäß der folgenden Maschinenrichtlinien konstruiert und gebaut wurde:
Is constructed and produced according to the following Machinery Directives:

98/37/EG
94/9/EG

Angewendete Normen, insbesondere:
Applied standards, in particular:

DIN EN ISO 12100-1, 2004-04
DIN EN ISO 14121, 2007-12
DIN EN ISO 12100-2, 2004-04
DIN EN ISO 3746, 1995-12
DIN EN 1127-1, 2008-02
DIN EN 13463-1, 2002-04
DIN EN 1953, 1998-12
DIN EN ISO 13732-1, 2006-12

Hinweis: Die Niederdruckspritzpistole darf nur für ihren bestimmungsgemässen Gebrauch unter Berücksichtigung der einschlägigen Sicherheitsbestimmungen verwendet werden.
The HVLP spray gun may only be used as directed considering the relevant safety regulation.

A handwritten signature in blue ink, appearing to read 'E. Friesen', is enclosed within a rectangular box.

(Manager director)

Datum: 01.April.2018

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1 Intended Use

The **ABAC** Spray Gun PN 1 / PN 1A is intended for spraying paints and lacquers. The spray gun should only be used for paints and lacquers approved by paint manufacturers for High Volume Low Pressure (HVLP) air-spraying technique application. These are for instance:

- Patina paints, two-component-paints, synthetic resin alkyd paints, acrylic and dispersion paints, colour effect paints, insulation / inflammation protection paints, sprayable wax materials.

Any use of the spray gun different from described in this manual is prohibited.

The difference between PN 1 and PN 1A **ABAC** Spray Guns consists in the appearance of spray guns. The housing and individual parts of PN 1A Spray Gun are nickel plated, the surface of PN 1 Spray Gun parts is without nickel covering. The appearance of guns does not affect their performance and other characteristics.

Identification number of PN 1 Spray Gun is BJ 381 000 0021; PN 1A Spray Gun - BJ 381 000 0020.

Always observe and comply with all processing instructions and safety notes provided by material manufacturers as well the prescriptions of this operating manual.

In any case, only paints and solvents with a flash point above 21°C = 70°F may be used for spraying!

Important ! The **ABAC** Spray Gun PN 1 / PN 1A must only be operated with low-pressure blowers (from 0,2 to 0,45 bar)! It is preferable to operate the spray gun in assembly with the original **ABAC** low pressure paint-spraying units.

As a part of original **ABAC** units, the **ABAC** Spray Gun PN 1 / PN 1A should work only in combination with **ABAC SG 2000**, **ABAC SG 2500** and **ABAC SG 3001** blowers. It is prohibited to use this spray gun together with blower units, where operating air is also applied for motor cooling (for example, with blower **ABAC SG 90**). In case of their co-use, when air supply will be stopped for spraying (by trigger release), motor overheating and unit breakdown may occur due to air backflow and accumulation.

Ambient temperature range for equipment operation is from 0°C to +45°C, relative humidity must not exceed 80%. Conditions of transportation and storage see Section 5.

2 Brief Description

The **ABAC** Spray Gun PN 1 / PN 1A consists of the spray gun itself and the screw-mounted paint container. The air is supplied to the spray gun by means of the connected air hose, which from the one side is inserted into the gun handle and from the other side is screwed into the connection pipe of the **ABAC** low-pressure blower.

The air flows through the pressure hose (Fig. 3, item 328) into the paint container where the pressure results in a uniform flow of paint.

The trigger releases the paint contained in the paint container for spraying through the nozzle. The flow of air atomizes the paint at the air-head. The amount of paint sprayed is adjustable with the setting screw (Fig. 3, item 316).

The trigger of the PN 1 / PN 1A Spray Gun has two positions:

- 1st position: air channel is opened
- 2nd position: paint channel is opened.

Note: Keep your operating manual and attached CE declaration of conformity in a safe place.

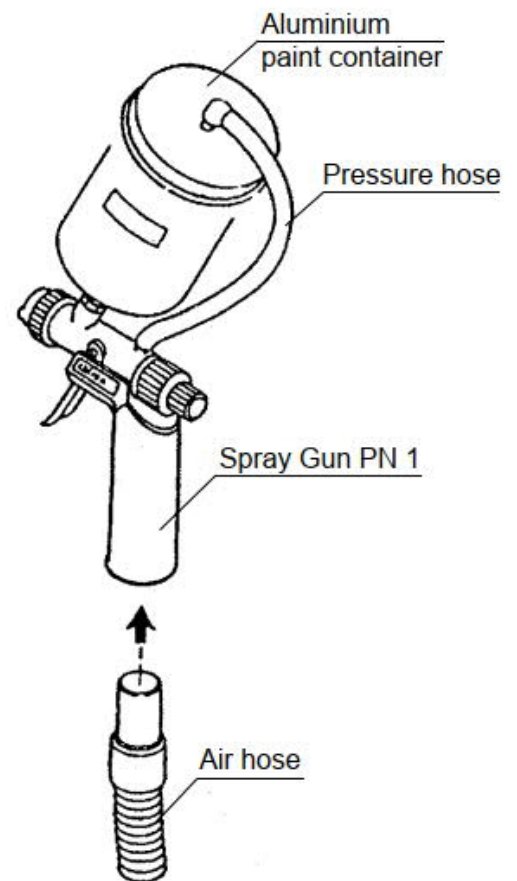


Figure 1

3 Technical Data

Mean sound level, DIN 45635, when connected to
SG 2000 blower 83 dB (A)

Only for paints and solvents with a flash point above 21 °C

Maximum permissible operating pressure 0,45 bar

Length approx. 180 mm

Width approx. 110 mm

Height approx. 350 mm

Weight 0.76 kg

4 Safety Notes

Besides this Operating Manual, and the requisite statutory safety regulations applicable in the country and place of use, operators must also abide by the recognized codes of practice for safe and workmanlike operation.

4.1 Principles; Correct Use

- The **ABAC** Spray Gun PN 1 / PN 1A is designed according to the latest technical findings and complies with recognized safety regulations. However, if used improperly, there is a risk of death or injury to the user or other persons, or of damage to the machine or other property.
- The **ABAC** Spray Gun PN 1 / PN 1A should only be used for its intended purpose and when it is in a perfect working order. The user must be safety conscious, fully aware of the risk, and follow the operating instructions. Faults that could impair the operating safety of the spray gun must be immediately remedied by an authorized person.
- The **ABAC** Spray Gun PN 1 / PN 1A must only be operated with low-pressure blowers (from 0,2 to 0,45 bar)! It is preferable to operate the spray gun in assembly with the original **ABAC** low pressure paint-spraying units.

As a part of original **ABAC** units, the **ABAC** Spray Gun PN 1 / PN 1A should work only in combination with **ABAC SG 2000**, **ABAC SG 2500** and **ABAC SG 3001** blowers. It is prohibited to use this spray gun together with blower units, where operating air is also applied for motor cooling (for example, with blower **ABAC SG 90**). In case of their co-use, when air supply will be stopped for spraying (by trigger release), motor overheating and unit breakdown may occur due to air backflow and accumulation.

Do not connect the spray gun to high-pressure blowers (from above 0,45 bar).

The equipment should never be used for any other purpose. The manufacturer or supplier is not responsible and will not be liable for damage or injury resulting from improper use, which shall be entirely at the user's risk.

- Warranty obligations are valid only if the user observes the instructions and recommendations described in this operating manual. Unauthorized changes and repair, use for maintenance of spare parts other than original parts supplied with the product and approved by the manufacturer or included in the spare parts list, as well operation of the equipment under conditions other than those permitted in this manual, will void the manufacturer's guarantee for the **ABAC** Spray Gun PN 1 / PN 1A.

4.2 Safe Operation

- Comply with the requirements of accident prevention regulation “Processing of Coating Materials” (e.g. in Germany VBG 23).
- All persons using the **ABAC** Spray Gun PN 1 / PN 1A must have read and understood this Operating Manual, particularly the section entitled “Safety Notes”.
- Use only paints and solvents with a flash point of 21°C / 70°F or higher without additional heating (see details on paint container).
- When working in confined spaces, these must be properly ventilated using effective technical ventilation systems.
- The **ABAC** Spray Gun PN 1 / PN 1A is not splash-proof. It must not be used out of doors, when it is raining or splashed or washed with water or immersed in liquid.
- The **ABAC** Spray Gun PN 1 / PN 1A must not be used in works locations subject to the provisions of explosion prevention regulations, or on premises and in areas where there is a risk of fire.
- Take care to ensure that there are no ignition sources in the vicinity, such as naked flames, sparks, glowing wires, hot surfaces, lighted cigarettes etc. The distance between spray jet exit and a possible source of ignition (even the device itself) must be at least 5 m (fire and explosion hazard from ignitable spray mist).
- The sprayed paint emerges from the nozzle at high pressure. Never direct the spray jet at people or animals. If the skin is injured by paint, lacquer or solvent there is a risk of infection. Seek medical treatment immediately and inform the doctor which paint, lacquer or solvent was used.
- Poisonous fumes may be given off during spraying (see details on the paint container). Use a breathing mask as directed by paint manufacturer’s instructions. Keep children and other people away from the working area.
- Keep the **ABAC** Spray Gun PN 1 / PN 1A in a safe place that is inaccessible to children and unauthorized personnel. Make sure that no unauthorized personnel (particularly children) can put the **ABAC** Spray Gun PN 1 / PN 1A into operation.
- Store your **ABAC** Spray Gun PN 1 / PN 1A in a dry ventilated room.
- For Safety reasons you should only use **ABAC** original accessories and **ABAC** original spare parts.

- Always turn off the compressed air supplied by the blower before the paint container of the **ABAC** Spray Gun PN 1 / PN 1A is refilled with paint.
- **Repairs and maintenance works must only be carried out by authorized specialists or by us (ABAC). Addresses of authorized firms can be obtained from us or from your dealer upon request.**
- **Take care not to spray in the direction of the blower.**
- Dispose of cleaning and spraying material wastes according to the instructions given by the relevant lacquer, paint and solvent manufacturers.

5 Transportation and storage

The **ABAC** Spray Gun PN 1 / PN 1A is supplied in a cardboard box. To avoid damage during transportation and storage, we recommend to use this original packaging. Store your equipment in a dry ventilated room.

Ambient temperature range for equipment storage is from 0°C to +45°C, relative humidity must not exceed 80%.

6 Start-Up and Operation

6.1 Connecting the Spray Gun

- Insert the air hose of the **ABAC** low-pressure blower into the insulated handle of the spray gun (see Fig.1).

6.2 Paint Preparation

- To ensure a satisfactory finish and problem-free working, particular attention must be paid to preparation of paints and / or lacquers.

Before you begin spraying, thin paints with the solvent specified by the supplier (if necessary). Add enough thinner so that after sufficient stirring the paint easily runs off the stirrer. To avoid uncertainty, we recommend the use of the dipper for viscosity check, whereby the time taken for the paint to run out shows whether the paint is still too thick and requires further thinning. As a general rule, the run out time is 18 to 30 DIN seconds for paints and lacquers, and 25 to 50 DIN seconds for special-effect lacquers and coating fillers (see section 13 Annex). These values were determined at a temperature of 20°C / 70°F. Lacquer and paint manufacturers usually specify the most favorable spraying consistency for their products.

- Test the viscosity with the dipper as follows:

After thinning the paint or lacquer to spraying consistency, immerse the dipping cup until it is full to the brim. To test, take the cup out quickly and count the number of seconds until all the paint has flowed through the 4 mm nozzle, that is to say, up to the moment, when there is a break in the outflow of paint. Count the seconds with your wrist watch or a stopwatch. Where, for example, a consistency of 19 DIN seconds is required but the test result is 24 DIN seconds, thin the paint accordingly and repeat the measurement.

It is advisable to clean the dipping cup immediately after use so that it can be reused for the next measurement.

- After thinning and stirring, sieve the paint into a clean container. To sieve the paint use a fine-mesh paint and lacquer sieve or nylon fabric.

“Our motto is: Correct thinning and sieving is half the battle won!”

6.3 Selecting the Correct Nozzle

Before you begin spraying, you must select the right nozzle for the paint and for the object to be sprayed (see also Section 13 “Annex”). For normal spraying work, the standard nozzle set (1.0 – 1.5 – 2.0 mm) is adequate:

- With **low-viscosity paint** and when spraying small objects or surface areas, use the 1.0 mm nozzle; for larger surface areas use the 1.5 mm nozzle.
- With **normal paints and lacquers** and for objects with larger surface areas, select the 1.5 mm nozzle.
- When working with **high-viscosity paint** or when applying thick coats (for example floating lacquering) use the 2.0 mm nozzle.
- Other nozzle sizes are available for special applications:
0,2 – 0,3 – 0.5 – 0.8 – 1.2 – 1.8 – 2.5 and 3.0 mm (special accessories).

6.4 Setting the Paint Jet

- To set the paint jet to a wide jet or a circular section jet (see Fig. 2) first loosen the nozzle ring (Fig. 3, item 321), then turn air distributor of the air-head (Fig. 3, item 320) to the desired position.

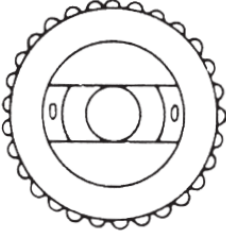
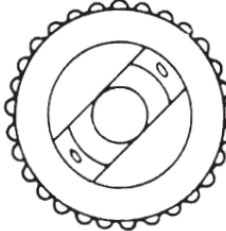
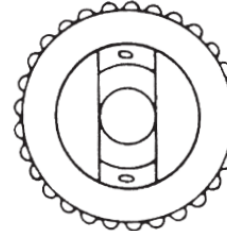
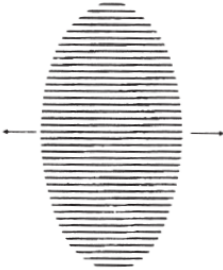

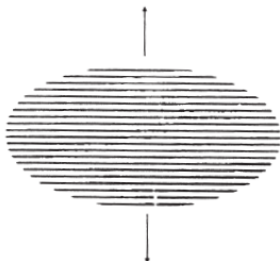
Paint jet	Flat jet	Circular-section jet	Wide jet
Air distributor position			
Jet cross-section (print)			
Gun movement	horizontal	horizontal, vertical, motionless (dot-like), circular, diagonally	vertical

Figure 2

- The wide jet is normally used for larger surface areas, the circular section jet for edging or spraying small and narrow areas.
- Paint consumption very largely depends on the correct paint jet setting for the type of object to be sprayed.

6.5 Regulation of the Paint Quantity

The paint quantity is regulated with the setting screw (Fig. 3, item 316). Tightening the setting screw limits the movement of the trigger (Fig. 3, item 304) and thus the travel of the nozzle needle. This setting facility should be used with very fine paint applications, for example stencil painting, patination, matt misting etc. Tightening the setting screw limits trigger travel. If this is the case, only pull trigger until this point is reached.

6.6 Filling the Paint

The paint container should be filled no higher than 2 cm below the brim. Close the lid securely. If the lid is not properly closed the gun will not work correctly.



Attention! Do not lay down the filled gun but place it on a stand or the spray gun holder, so that paint cannot flow into the pressure hose through the small opening in the lid of the paint container. We highly recommend always use the spray gun holder for resting the gun on.

- The paint must first be thinned to spraying consistency in order to obtain the optimal spray gun setting. Before starting the actual spraying work it is advisable to spray a specimen (e.g. on cardboard or wood). Start spraying only after the result of specimen spraying is satisfactory.
- Ensure that the adjoining areas of the object to be sprayed have been carefully covered.

7 After Paint Spraying has Finished

After you have finished spraying, turn off the **ABAC** low-pressure blower. Then disconnect the air hose from the insulating handle of the **ABAC** Spray Gun PN 1 / PN 1A. Clean the spray gun as described in section 8.1.

8 Care, Maintenance and Repair



Always disconnect the air hose of the ABAC low-pressure blower from the spray gun prior to all care, maintenance and repair work.

Repairs must only be performed by authorized specialist firms or by us. A list of authorized firms can be obtained from us or your dealer.

A special after-sales service for the **ABAC** Spray Gun PN 1 / PN 1A is not necessary. However, the packing seal and the lid seal must be replaced when they are worn out (see section 9).

8.1 Cleaning the Spray Gun

The spray gun should be cleaned immediately after the spraying work has been completed. The cleaning procedure is as follows:

- 1) Pour out any remaining paint.
- 2) Rinse out the paint container thoroughly with a suitable solvent. During rinsing, operate the trigger several times to clean the paint channels and nozzle.

3) Clean the brim of the container and the lid with seal carefully with a soft cloth or brush using a suitable thinner.

On no account use sharp-edged tools as these may damage the seal and the surface of the container.

Dried paint residues on the air-head (Fig. 3, item 320) should not be scratched off with a hard object. Immerse the air-head into a thinner for few minutes and then remove the residual with a brush.

Attention! After working with water-soluble paints such as acrylic paints, dispersions or binder emulsions, the nozzle, nozzle-needle, trigger and the thread of the spring bushing (Fig.3, item 310) should be lightly oiled after cleaning.

If corrosive cleaning products are used, the spray gun components must be rinsed with clean water immediately after cleaning and thoroughly dried to prevent corrosion.

Attention! Never immerse the complete spray gun or the lid with seal in corrosive cleaning products, thinner or solvent. Also store no corrosive cleaning products, thinner or solvent in the paint container. After cleaning of the spray gun do not tighten the lid so that the seal not lose the elasticity.

If there is a leak in the cover seal of the paint container, or if it is defective, replace the seal.

8.2 Changing the Nozzle

Unscrew nozzle ring (Fig. 3, item 321), then take out air-head (Fig. 3, item 320). Change the nozzle using nozzle spanner supplied (Fig. 3, item 322).

8.3 Removing the Nozzle Needle

Unscrew spring bushing (Fig 3, item 310) from the housing (Fig. 3, item 301), take out valve disk (Fig. 3, item 308) and pressure spring (Fig. 3, item 309). Then unscrew setting screw (Fig. 3, item 316) from spring bushing and push nozzle needle (Fig. 3, items 311 to 313) to rear. In this way, the pressure spring (Fig. 3, item 314) complete with shim (Fig. 3, item 315) will be ejected as well.

8.4 Fitting the Nozzle Needle

To fit the nozzle needle, reverse the sequence described above.

The nozzle needle is sealed by a packing (Fig. 3, item 306). The slotted screw (Fig. 3, item 307) which engages in the thread of the nut (Fig. 3, item 305) presses the packing against the nozzle needle. If paint emerges from the seal, tighten the slotted screw with the nozzle spanner (remove nozzle needle). If the result is not satisfactory, renew the seal packing.

8.5 Replacing the Seal Packing

To replace the seal packing proceed as follows:

- 1) Unscrew spring bushing (Fig. 3, item 310) from spray gun housing (Fig. 3, item 301) and remove it together with the nozzle needle (Fig. 3, items 311 to 313).
- 2) Withdraw the trigger (Fig. 3, item 304) sideways out of the gun housing.
- 3) Unscrew the slotted screw (Fig. 3, item 307) from the nut and take out the faulty packing.
- 4) Unscrew nozzle ring (Fig. 3, item 321) and take out air-head (Fig. 3, item 320).
- 5) Unscrew nozzle and push the nozzle needle forwards through the adapter (Fig. 3, item 303).
- 6) Slip the new packing and the slotted screw on to the projecting nozzle needle.
- 7) Pull back the nozzle needle and screw the slotted screw into the nut using the nozzle spanner.
- 8) After inserting the nozzle needle in its normal position, check the spray gun for leaks.

9 Faults, Possible Causes and Remedies

Attention! Never use hard or sharp-edged tools for cleaning!!!

Fault	Possible causes	Remedy
Paint flows into the spray gun housing	<ul style="list-style-type: none"> • Packing seal of nozzle needle either leaking or defective 	<ul style="list-style-type: none"> • Clean the spray gun, tighten or change nozzle needle seal (packing)
	<ul style="list-style-type: none"> • Paint has passed from the paint container through the pressure hose into the housing 	<ul style="list-style-type: none"> • Clean the spray gun and pressure hose, always hold the spray gun vertical. Don't forget to use a flexible joint and the spray gun stand / holder
	<ul style="list-style-type: none"> • Duckbill valve either improperly installed or defective 	<ul style="list-style-type: none"> • Clean the spray gun and pressure hose, check position and state of the duckbill valve. Adjust valve position, if necessary, replace the valve
Individual drops appear in the spray pattern	<ul style="list-style-type: none"> • Nozzle is clogged 	<ul style="list-style-type: none"> • Clean nozzle
	<ul style="list-style-type: none"> • Nozzle is damaged or worn out 	<ul style="list-style-type: none"> • Replace nozzle
	<ul style="list-style-type: none"> • Nozzle needle is damaged 	<ul style="list-style-type: none"> • Replace nozzle needle
	<ul style="list-style-type: none"> • Paint has incorrect spraying consistency 	<ul style="list-style-type: none"> • Check spraying consistency of paint, use viscosity dipper
Paint still emerges from the nozzle after releasing the trigger	<ul style="list-style-type: none"> • Nozzle and / or nozzle needle are / is damaged 	<ul style="list-style-type: none"> • Replace nozzle and / or nozzle needle
	<ul style="list-style-type: none"> • Setting nut (Fig.3, item 312) on nozzle needle has gone out of adjustment 	<ul style="list-style-type: none"> • Unscrew the setting nut on the nozzle needle until there is adequate clearance

Störung	Mögliche Ursache	Abhilfe
Spray gun delivers no paint or works unevenly	• Lid is not properly closed	• Carefully clean the lid, lid seal and rim of cup and, if necessary, replace lid seal.
	• Angle-piece and/or pressure hose are/is blocked	• Clean angle-piece and pressure hose
	• Nozzle is blocked	• Clean/change nozzle
Wide jet uneven	• Side holes in air-head are clogged	• Clean air-head
Paint jet sprays to one side	• Paint has accumulated on the outside of the nozzle	• Clean the nozzle
	• Nozzle is not tightly seated	• Tighten the nozzle
	• Holes in the air-head are clogged	• Clean the air-head

10 Operating Instructions

Depending on actual use and location of the equipment, users must issue an operating instruction, based on this manual and in the language of their employees, to define further details for the safe operation of the **ABAC** Spray Gun PN 1 / PN 1A. This operating instruction is to be displayed in a suitable public place at the workplace and to be read and observed by all employees.

11 Spare Parts



For safety reasons you should only use **ABAC** original accessories and **ABAC** original spare parts.

Spare parts are available from your **ABAC** specialist dealer or direct from us.

For speedy and efficient ordering of spare parts we require the following details:

- Identification number and designation of the spare part
- Quantity of spare parts required
- Address

Spare Parts List for **ABAC** PN 1 Spray Gun (Identification number BJ 381 000 0021) (Figure 3)

Fig. No.	Quantity	Designation	Ident Number
301	1	Housing	HE 381 100 00 02
302	1	Insulating Handle	HE 300 166 03 30
303	1	Nozzle Adapter	HE 300 161 15 14
304	1	Trigger	B0 381 100 00 12
305	1	Hexagonal nut	B0 300 161 44 11
306	1	Seal packing	HE 300 161 12 00
307	1	Slotted screw	B0 300 161 62 01
308	1	Valve disk	HE 381 100 00 30
309	1	Pressure spring	H5 970 780 01 01
310	1	Spring bushing	HE 381 100 00 40
311	1	Nozzle needle	HE 381 100 00 20
312	1	Hexagonal nut, self-locking	H5 808 512 00 00
313	1	Spring plate	HE 311 162 61 00
311-313	1	Complete nozzle needle assembly	BJ 000 971 06 00
314	1	Pressure spring	H5 970 560 01 01
315	1	Shim	H5 810 371 00 00
316	1	Setting screw	HE 300 161 14 01
317	1	1.0 mm diameter nozzle	HE 300 161 20 22
318	1	1.5 mm diameter nozzle	HE 300 161 20 32
319	1	2.0 mm diameter nozzle	HE 300 161 20 42
320	1	Complete air-head assembly	
	1	Flow sleeve	HE 300 161 17 30
	1	Air distributor	HE 300 161 18 25
321	1	Nozzle ring	B0 300 161 19 06
322	1	Nozzle spanner	B0 300 162 51 04
323	1	Adapter	HE 300 161 31 10
324	1	O – Ring 14 x 18 mm, pack with 5 pieces	H5 108 160 51 76
325	1	Aluminium paint container without lid	B0 300 161 70 03
326	1	Aluminium lid with seal:	
	1	Aluminium lid	HE 300 161 75 02
	1	Seal, pack with 5 pieces	HE 300 161 76 02
327	1	Angle piece	HE 300 161 77 02
328	1	Pressure air-hose 8x260 mm	BJ 000 991 95 04
329	1	Duckbill valve, pack with 5 pieces	AB36836

Spare Parts List for **ABAC** PN 1A Spray Gun (Identification number BJ 381 000 0020) (Figure 3)

Fig. No.	Quantity	Designation	Ident Number
301	1	Housing (nickel plated)	HE 381 100 00 01
302	1	Insulating Handle	HE 300 166 03 30
303	1	Nozzle Adapter	HE 300 161 15 14
304	1	Trigger (nickel plated)	B0 381 100 00 12
305	1	Hexagonal nut	B0 300 161 44 11
306	1	Seal packing, bag with 5 pieces	HE 300 161 12 00
307	1	Slotted screw	B0 300 161 62 01
308	1	Valve disk	HE 381 100 00 30
309	1	Pressure spring	H5 970 780 01 01
310	1	Spring bushing	HE 381 100 00 40
311	1	Nozzle needle	HE 381 100 00 20
312	1	Hexagonal nut, self-locking	H5 808 512 00 00
313	1	Spring plate	HE 311 162 61 00
311-313	1	Complete nozzle needle assembly	BJ 000 971 06 00
314	1	Pressure spring	H5 970 560 01 01
315	1	Shim	H5 810 371 00 00
316	1	Setting screw	HE 300 161 14 01
317	1	1.0 mm diameter nozzle	HE 300 161 20 22
318	1	1.5 mm diameter nozzle	HE 300 161 20 32
319	1	2.0 mm diameter nozzle	HE 300 161 20 42
320	1	Complete air-head assembly (nickel plated)	BJ 000 971 02 00
	1	Flow sleeve	HE 300 161 17 30
	1	Air distributor (nickel plated)	HE 300 161 18 26
321	1	Nozzle ring	B0 300 161 19 06
322	1	Nozzle spanner	B0 300 162 51 04
323	1	Adapter	HE 300 161 31 10
324	1	O – Ring 14 x 18 mm, pack with 5 pieces	H5 108 160 51 76
325	1	Aluminium paint without lid	B0 300 161 70 03
326	1	Aluminium lid with seal:	
	1	Aluminium lid	HE 300 161 75 02
	1	Seal, pack with 5 pieces	HE 300 161 76 02
327	1	Angle piece	HE 300 161 77 02
328	1	Pressure air-hose 8x260 mm	BJ 000 991 95 04
329	1	Duckbill valve, pack with 5 pieces	AB36836

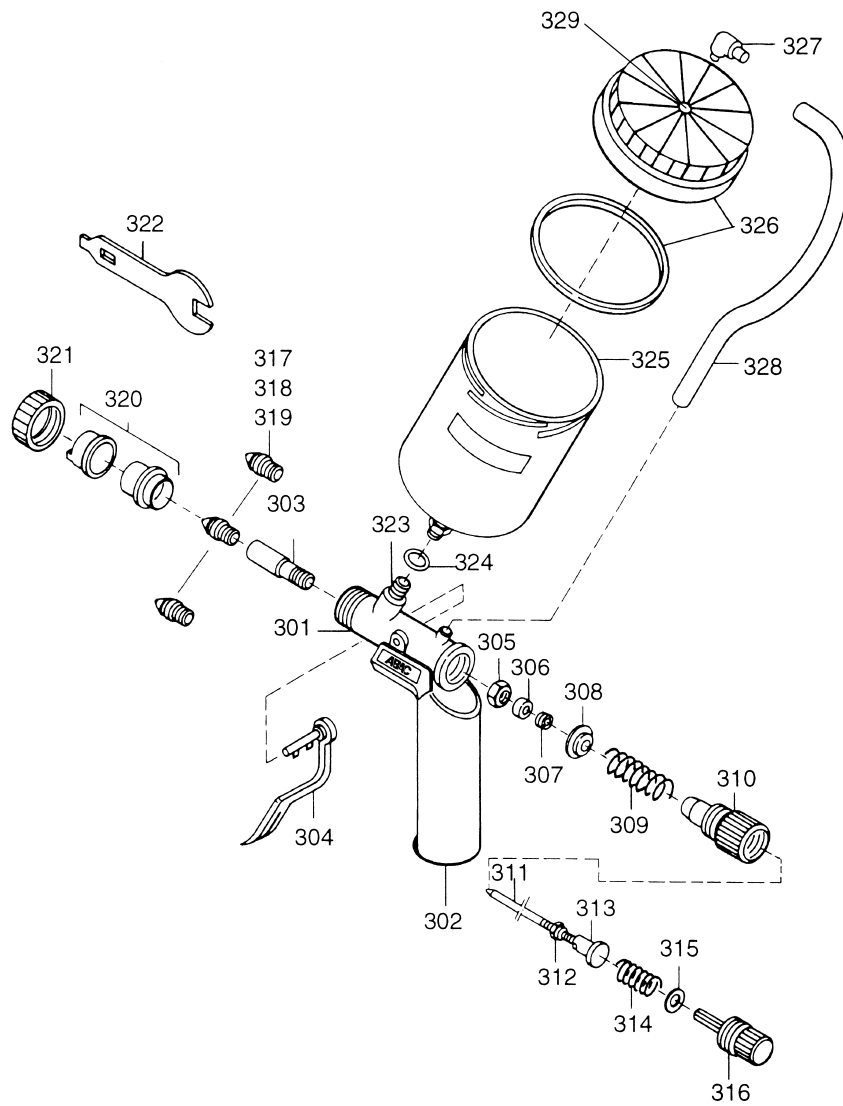


Figure 3

12 Special Accessories

Fig. No.	Quantity	Designation	Ident Number
	1	0.2 mm diameter nozzle	HE 300 161 20 51
	1	0.3 mm diameter nozzle	HE 300 161 20 52
	1	0.5 mm diameter nozzle	HE 300 161 20 53
	1	0.8 mm diameter nozzle	HE 304 161 20 02
	1	1.2 mm diameter nozzle	HE 300 161 20 08
	1	1.8 mm diameter nozzle	HE 304 161 20 22
	1	2.5 mm diameter nozzle	HE 300 161 20 62
	1	3.0 mm diameter nozzle	HE 300 161 20 72
		Flexible joint (Fig.4, 5)	
201	1	Flexible joint for pain container, complete	H1 025 330 00 20
207	1	O – ring A 14 x 18	H5 108 160 51 76
208	1	Pressure hose, 8 mm internal dia., 360 mm long	BJ 000 991 95 07
		Extension pipe, spraying at right angles (Fig.6)	
401-407	1	Extension pipe 300 mm, complete:	BJ 311 160 31 10
401	1	Nozzle needle	HE 311 162 09 10
402	1	Spring plate	HE 311 162 61 00
403	1	Lock nut M4	H5 808 512 00 00
404	1	Nozzle tube	B0 311 160 33 01
405	1	Securing spring	HE 311 162 60 00
406	1	Brass tube 15 x 1 mm, nickel plated	B0 311 162 31 02
407	1	Nozzle attachment body	B0 311 162 07 00

12.1 Flexible joint between gun housing and paint container (Fig. 4 and 5)

To spray upwards whilst keeping the paint container vertical, use the flexible joint (Fig. 4, item 201) available as a special accessory.

Flexible joint installation order:

- 1) First, withdraw the angle-piece (Fig. 3, item 327) from the paint container lid and dismantle the pressure hose (Fig. 3, item 328). Then pull the pressure hose off the spray gun (Fig. 3, item 301) and replace it with the longer pressure hose (Figs. 4 and 5, item 208).
- 2) Unscrew the paint container (Fig. 3, item 325) and the brass adapter (Fig. 3, item 323), using the nozzle spanner. Remove the O-Ring (Fig. 3, item 324) from the adapter.
- 3) Remove the hexagonal nut (Fig. 5, item 206) and the O-Ring (Figs. 4 and 5, item 207) from the flexible joint. Screw the hexagonal nut back on to the flexible joint thread. Then add the O – Ring (Fig. 3, item 324) and screw the flexible joint together with hexagonal nut and O-ring on to the gun body. Align flexible joint and tighten hexagonal nut (Fig. 5, item 206). Place the other O – Ring (Fig. 5, item 207) on the upper thread of the flexible joint, then screw the paint container on again and tighten.
- 4) Finally, screw the angle-piece (Fig. 3, item 327) into the paint container lid, attach the longer pressure hose (Fig. 4, item 208) to the spray gun housing and the angle-piece.

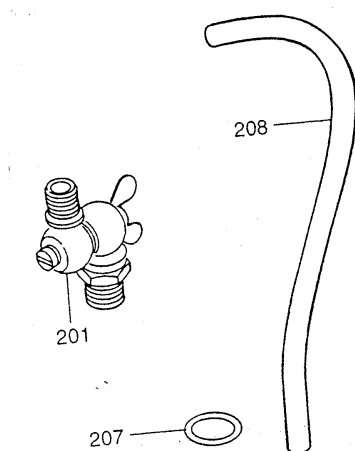


Figure 4

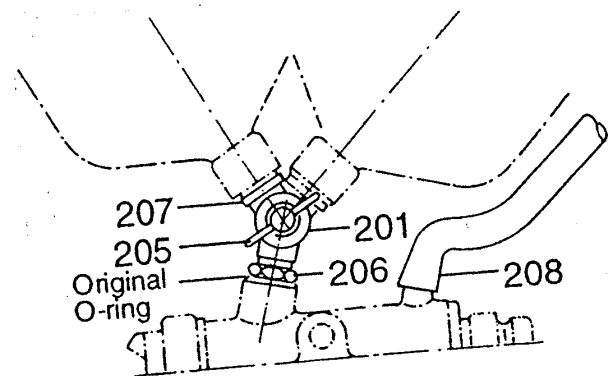


Figure 5



Attention! The wing-nut (Fig. 5, item 205) should be tightened only gently, so that the container still be moved.

12.2 Extension pipe for spraying points that are not readily accessible (Fig. 6)

Intended use: spraying materials in hard-to-reach areas, as well the possibility of changing the spraying direction by 90°.

Extension pipe installation order:

1) Unscrew the nozzle coupling nut (Fig.3, item 321) from the **ABAC** Spray Gun PN 1 / PN 1A. Now remove the air head (Fig.3, item 320) and nozzle (Fig.3, items 317, 318, 319). Then dismantle the nozzle needle as described in section 8.3.

2) Insert the nozzle needle (Fig.6, item 401) in the spring bushing (Fig.3, item 310). Insert the pressure spring (Fig.3, item 314) and the shim (Fig. 3, item 315), and then screw the setting screw (Fig. 3, no3. 316) into the spring bushing (Fig.3, item 310). The parts assembled in this manner are now inserted into the spray gun housing.

3) Screw in the nozzle tube (Fig.6, item 404) in place of the normal nozzle and tighten slightly.

4) Insert the attachment lance (Fig.6, item 406) with released nozzle attachment piece (Fig.6, item 407) into the spray gun housing and tighten slightly with the coupling nut (Fig.3, item 321). Tighten the nozzle attachment piece (Fig.6, item 407) slightly so that it can still be turned to any required position for spraying.

5) After reassembly, the trigger (Fig.3, item 304) should still have a slight measure of play. It must not be in contact with the front of the spray gun housing, otherwise the nozzle needle will not close tightly. The measure of play can be increased by readjusting the self-locking hexagonal nut (Fig.6, item 403) on the nozzle needle.

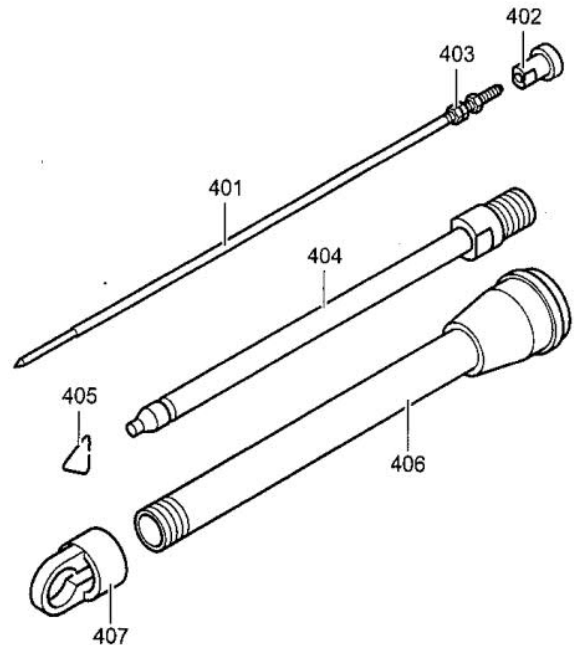


Figure 6

13 Annex

Notes on processing and settings data for spraying tasks using **ABAC** Spray Gun PN 1 / PN 1A, measured with 4 mm dipper cup for viscosity checks at a spray material temperature of 20°C/70°F.

Spray Material	Nozzle Diameter (mm)	Jet / Pattern Type		Viscosity DIN-Sec.	Thinning Vol.-% approx.
		flat	circular		
Zapon lacquer	0,8-1,0-1,5	x	x	16 – 20	10
Fast polished surface primer matting, polishing paint etc.	1,5 – 2,0	x	x	16 – 20	10
Patinates	0,5 – 0,8 – 1,0	x	x	original	undiluted
Filler primers	1,5 – 2,0 – 2,5	x	x	20 – 30	10
Two component paint DD, colourless paints	1,0 - 1,5 – 2,0	x	x	16 – 25	5
Pigmented paints	1,0 – 1,5 – 2,0	x	x	16 – 30	5
Synthetic alkyd paints, acrylic paints	1,0 – 1,5 – 2,0	x	x	16 – 25	10
Silk gloss paints	1,5 – 2,0	x	x	16 – 25	10
Radiator paints	1,5 – 2,0	x	x	17 – 21	10
Acrylic and dispersion paints	2,0 – 2,5 – 3,0	x	x	20 – 30	10
Primer oil paints	1,5 – 2,0	x	x	16 – 25	10
Synthetic paints, PVC etc.	1,5 – 2,0	x	x	20 – 30	10
Coating filler, polyester DD synthetic resin etc.	1,5 – 2,0 – 2,5	x	x	18 – 30	10
Effect paints, touch up	1,5 – 2,0 – 2,5	x	x	30 – 40	10
Hammer effect paints	1,5 – 2,0 – 2,5	x	x	20 – 25	10
Sigmulto, Diwatone / Alphatone, Jäger mosaic paint, Aquaria, colour effect paint	2,5 – 3,0		x	original	undiluted
Insulation / Ignition / Protection impregnations oils	1,5 – 2,0 – 2,5	x	x	original	undiluted
Anticorrosive primers, paints reaction primer	1,5 – 2,0	x	x	16 – 25	5
Aluminum bronze	1,0 – 1,5 – 2,0	x	x	original	undiluted
Finish – sprayable waxes	1,0 – 1,5 – 2,0	x	x	original	undiluted

Note:

This spray material can also be applied in speckled fashion, if you unscrew the entire air-head from your spray gun.