

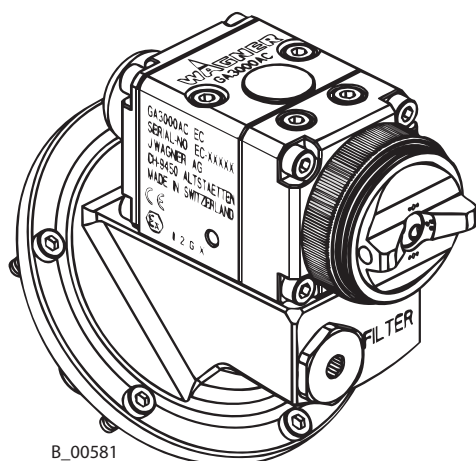


Translation of the original
operating manual

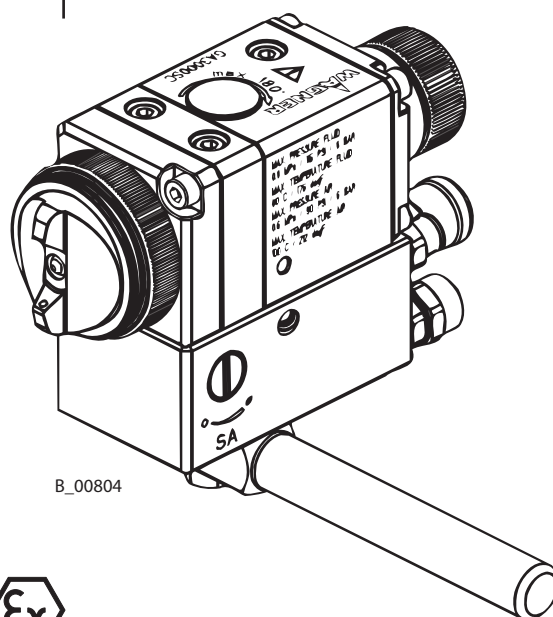
GA 3000ACEC
GA 3000AC Robot EC

Edition 07/2007

AirCoat
Automatic spray gun



B_00581



B_00804



II 2GX (Atex 95)

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1 ABOUT THESE INSTRUCTIONS

This operating manual contains information on the operation, repair and maintenance of the unit.

→ Always observe these instructions when operating the unit.

This equipment can be dangerous if it is not operated in accordance with this manual.

Compliance with these instructions constitutes an integral component of the warranty agreement.

1.1 LANGUAGES


This operating manual is available in the following languages:

Language:	Part No.	Language:	Part No.
German	380840	English	380841
French	380842	Dutch	380843
Italian	380844	Spanish	380845
Danish	380847	Swedish	380846
Portuguese	---	Polish	380848

1.2 WARNINGS, NOTES AND SYMBOLS IN THESE INSTRUCTIONS


Warning instructions in this manual point out particular dangers to users and equipment and state measures for avoiding the hazard. These warning instructions fall into the following categories:

Danger - imminent danger. Non-observance will result in death, serious injury and serious material damage.

	⚠ DANGER
	<p>This line warns of the hazard ! Possible consequences of failing to observe the warning instructions. The signal word points out the hazard level.</p> <p>→ The measures for preventing the hazard and its consequences.</p>


SIHI_0100_GB

Warning - possible danger. Non-observance can result in death, serious injury and serious material damage.

	⚠ WARNING
	<p>This line warns of the hazard ! Possible consequences of failing to observe the warning instructions. The signal word points out the hazard level.</p> <p>→ The measures for preventing the hazard and its consequences.</p>

SIHI_0103_GB

Caution - a possibly hazardous situation. Non-observance can result in minor injury.

	⚠ CAUTION
	<p>This line warns of the hazard ! Possible consequences of failing to observe the warning instructions. The signal word points out the hazard level.</p> <p>→ The measures for preventing the hazard and its consequences.</p>

SIHI_0101_GB

Caution - a possibly hazardous situation. Non-observance can cause material damage.

SIHI_0102_GB	CAUTION
<p>This line warns of the hazard ! Possible consequences of failing to observe the warning instructions. The signal word points out the hazard level.</p> <p>→ The measures for preventing the hazard and its consequences.</p>	

Note - provide information on particular characteristics and how to proceed.

2 GENERAL SAFETY INSTRUCTIONS

2.1 SAFETY INSTRUCTIONS FOR THE OPERATOR

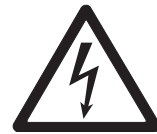
- Keep these operating instructions to hand near the unit at all times.
- Always follow local regulations concerning occupational safety and accident prevention.



2.1.1 ELECTRICAL EQUIPMENT

Electrical plant and unit

- To be provided in accordance with the local safety requirements with regard to the operating mode and ambient influences.
- May only be maintained by skilled electricians or under their supervision.
- Must be operated in accordance with the safety regulations and electrotechnical regulations.
- Must be repaired immediately in the event of problems.
- Must be put out of operation if they pose a hazard.
- Must be de-energized before work is commenced on active parts. Inform staff about planned work, observe electrical safety regulations.



2.1.2 PERSONNEL QUALIFICATIONS

- Ensure that the unit is operated and repaired only by trained persons.

2.1.3 A SAFE WORK ENVIRONMENT

- Ensure that the floor of the working area is anti-static in accordance with EN 50053 Part 1, §7-2, measurement in accordance with DIN 51953.
- Ensure that all persons within the working area wear anti-static shoes, e.g. shoes with leather soles.
- Ensure that during spraying, persons wear anti-static gloves so that they are earthed via the handle of the spray gun.
- Customer to provide paint mist extraction systems conforming to local regulations.
- Ensure that the following components of a safe working environment are available:
 - Material/air hoses adapted to the working pressure
 - Personal safety equipment (breathing and skin protection)
- Ensure that there are no ignition sources such as naked flame, glowing wires or hot surfaces in the vicinity. Do not smoke.



2.2 SAFETY INSTRUCTIONS FOR STAFF

- Always follow the information in these instructions, particularly the general safety instructions and the warning instructions.
- Always follow local regulations concerning occupational safety and accident prevention.



2.2.1 SAFE HANDLING OF WAGNER SPRAY UNITS

The spray jet is under pressure and can cause dangerous injuries.

Avoid injection of paint or cleaning agents:

- Never point the spray gun at people.
- Never reach into the spray jet.
- Before all work on the unit, in the event of work interruptions and functional faults:
 - Switch off the energy/compressed air supply.
 - Secure the spray gun against actuation.
 - Relieve the pressure from the spray gun and unit.
 - By functional faults: Identify and correct the problem, proceed as described in chap. „Trouble shooting“.

In the event of skin injuries caused by paint or cleaning agents:

- Note down the paint or cleaning agent that you have been using.
- Consult a doctor immediately.

Avoid danger of injury through recoil forces:

- Ensure that you have a firm footing when operating the spray gun.
- Only hold the spray gun briefly in any one position.



2.2.2 EARTH THE UNIT

Electrostatic charges can occur on the unit due to the electrostatic charge and the flow speed involved in spraying. These can cause sparks and flames upon discharge.

- Ensure that the unit is always earthed.
- Earth the work pieces to be coated.
- Ensure that all persons inside the working area are earthed, e.g. that they are wearing antistatic shoes.
- When spraying, wear antistatic gloves to earth yourself via the spray gun handle.



2.2.3 MATERIAL HOSES

- Ensure that the hose material is chemically resistant to the sprayed materials.
- Ensure that the material hose is suitable for the pressure generated in the unit.
- Ensure that the following information is visible on the high-pressure hose:
 - Manufacturer
 - Permissible operating overpressure
 - Date of manufacture.
- The electrical resistance of the complete high-pressure hose must be less than 1 MOhm.



2.2.4 CLEANING

- De-energize the unit electrically.
- Disconnect the pneumatic supply line.
- Relieve the pressure from the unit.
- Ensure that the flash point of the cleaning agent is at least 5 K above the ambient temperature.
- To clean, use only solvent-free cloths and brushes. Never use hard objects or spray on cleaning agents with a gun.

An explosive gas/air mixture forms in closed containers.

- When cleaning units with solvents, never spray into a closed container.
- Earth the container.

**2.2.5 HANDLING HAZARDOUS LIQUIDS, VARNISHES AND PAINTS**

- When preparing or working with paint and when cleaning the unit, follow the working instructions of the manufacturer of the paints, solvents and cleaning agents being used.
- Take the specified protective measures, in particular wear safety goggles, protective clothing and gloves, as well as hand protection cream if necessary.
- Use a mask or breathing apparatus if necessary.
- For sufficient health and environmental safety: Operate the unit in a spray booth or on a spraying wall with the ventilation (extraction) switched on.
- Wear suitable protective clothing when working with hot materials.

**2.2.6 TOUCHING HOT SURFACES**

- Touch hot surfaces only if you are wearing protective gloves.
- When operating the unit with a coating material with a temperature of >43°C; 109.4°F:
 - Identify the unit with a warning label that says „Warning - hot surface“.

**Order No.**

9998910 Information label

9998911 Safety label

2.3 CORRECT USE

WAGNER accepts no liability for any damage arising from incorrect use.

- Use the unit only to work with the materials recommended by WAGNER.
- Operate the unit only as an entire unit.
- Do not deactivate safety equipment.
- Use only WAGNER original spare parts and accessories.



2.4 USE IN AN EXPLOSION HAZARD AREA

2.4.1 CORRECT USE

The unit is suitable for working liquid materials in accordance with the classification into explosion classes.

2.4.2 EXPLOSION PROTECTION IDENTIFICATION

As defined in the Directive 94/9/CE (ATEX 95), the unit is suitable for use in areas where there is an explosion hazard.

CE  II 2G X

- CE: Communautés Européennes
- Ex: Symbol for explosion protection
- II: Unit class II
- 2: Category 2 (Zone 1)
- G: Ex-atmosphere gas
- X: See: "Special Notes" in the operating manual



2.4.2 MAXI. SURFACE TEMPERATURE

The unit's maximum surface temperature depends on the temperature of the coating material.

The unit is suitable for coating materials with a max. temperature of 80°C; 176°F.

Ambient temperature

Permissible ambient temperature +5°C to +40°C; +41°F to +104°F.

2.4.4 SAFETY INSTRUCTIONS

Safe handling of WAGNER spray units

Mechanical sparks can form if the unit comes into contact with metal.

In an explosive atmosphere:

- Do not knock or push the unit against steel or rusty iron.
- Do not drop the spray gun.
- Use only tools that are made of a permitted material.

Ignition temperature of the coating material

→ Ensure that the ignition temperature of the coating material is above the maximum surface temperature.

Medium supporting atomizing

→ To atomize the material, use only weakly oxidizing gases, e.g. air.

Cleaning

If there are deposits on the surfaces, the unit may form electrostatic charges. Flames or sparks can form if there is a discharge.

3 PRODUCT LIABILITY AND WARRANTY

3.1 IMPORTANT NOTES ON PRODUCT LIABILITY

As a result of an EC regulation, effective as from January 1, 1990, the manufacturer shall only be liable for his product if all parts come from him or are approved by him, and if the devices are properly fitted, operated and maintained.

If other makes of accessory and spare parts are used, the manufacturer's liability could be fully or partially null and void.

The usage of original WAGNER accessories and spare parts guarantees that all safety regulations are observed.

3.2 WARRANTY

This unit is covered by our warranty on the following terms:

We will at our discretion repair or replace free of charge all parts which within 24 months in single-shift, 12 months in 2-shift or 6 months in 3-shift operation from date of receipt by the Purchaser are found to be wholly or substantially unusable due to causes prior to the sale, in particular faulty design, defective materials or poor workmanship.

The terms of the warranty are met at our discretion by the repair or replacement of the unit or parts thereof. The resulting costs, in particular shipping charges, road tolls, labour and material costs will be borne by us except where these costs are increased due to the subsequent shipment of the unit to a location other than the address of the purchaser.

This warranty does not cover damage caused by:

Unsuitable or improper use, faulty installation or commissioning by the purchaser or a third party, normal wear, negligent handling, defective maintenance, unsuitable coating products, substitute materials and the action of chemical, electrochemical or electrical agents, except when the damage is attributable to us.

Abrasive coating products such as redlead, emulsions, glazes, liquid abrasives, zinc dust paints and similar reduce the service life of valves, packings, spray guns, nozzles, cylinders, pistons etc. Any wear resulting from the aforementioned causes is not covered by this warranty.

Components not manufactured by Wagner are subject to the warranty terms of the original maker.

The replacement of a part does not extend the warranty period of the unit.

The unit should be inspected immediately upon receipt.

To avoid loss warranty, any apparent defect should be notified to us or the dealer in writing within 14 days from date of sale of the unit.

The right to commission warranty services to a third party is reserved.

Warranty claims are subject to proof of purchase by submitting an invoice or delivery note. If an inspection finds damage not covered by the present warranty, the repair will be carried out at the expense of the purchaser.

Note that this warranty does not in any way restrict legally entitled claims or those contractually agreed to in our general terms and conditions.

3.3 CE-CONFORMITY

Herewith we declare that the supplied version of

380001	AirCoat automatic gun GA 3000ACIC
380030	AirCoat automatic gun GA 3000ACIC, USA
380002	AirCoat automatic gun GA 3000ACIC UV
380031	AirCoat automatic gun GA 3000ACIC UV, USA
380003	AirCoat automatic gun GA 3000ACIC S



Complies with the following guidelines:

98/37/EG 94/9/EG

Applied standards, in particular:

EN 292-1	EN 1127
EN 292-2	EN 1953
EN 563	EN ISO 3746
EN 1050	EN 13463

Applied national technical standards and specifications, in particular:

BGV D 15	BGR 104
BGV D 25	BGR 132

Marking:

CE  II 2G X

CE Certificate of Conformity

The certificate is enclosed with this product. The certificate of conformity can be reordered from your WAGNER representative, quoting the product and serial number.

Part number:

GA 3000AC 380850

3.4 GERMAN REGULATIONS AND GUIDELINES

- a) BGV D15 Working with liquid ejection devices
- b) BGV D25 Using coating materials
- c) CHV 9 Regulations on flammable liquids
- d) BGR 104 Explosion protection rules
- e) BGR 132 Avoiding ignition risks
- f) BGR 180 Setting up for cleaning with solvents for cleaning workpieces with solvents
- g) ZH 1/406 Guidelines for liquid ejection devices
- h) BGI 740 Painting rooms and equipment

Note: All titles can be ordered from Heymanns Publishing House in Cologne or download from Internet.

4 DESCRIPTION

4.1 AREA OF APPLICATION, USING IN ACCORDANCE WITH THE INSTRUCTIONS

The gun is suitable for atomising liquid materials, particularly coating materials, using the AirCoat process.

4.1.1 PROCESSABLE MATERIALS

Top-coat paints, primer paints, corrosion protection solvents, textured paints, lyes, staining solvents, clear paints, parting solvents, etc. on a solvent or water basis.

Note

In the case of application problems contact the WAGNER technical adviser and the paint producer.

4.2 SCOPE OF SUPPLY

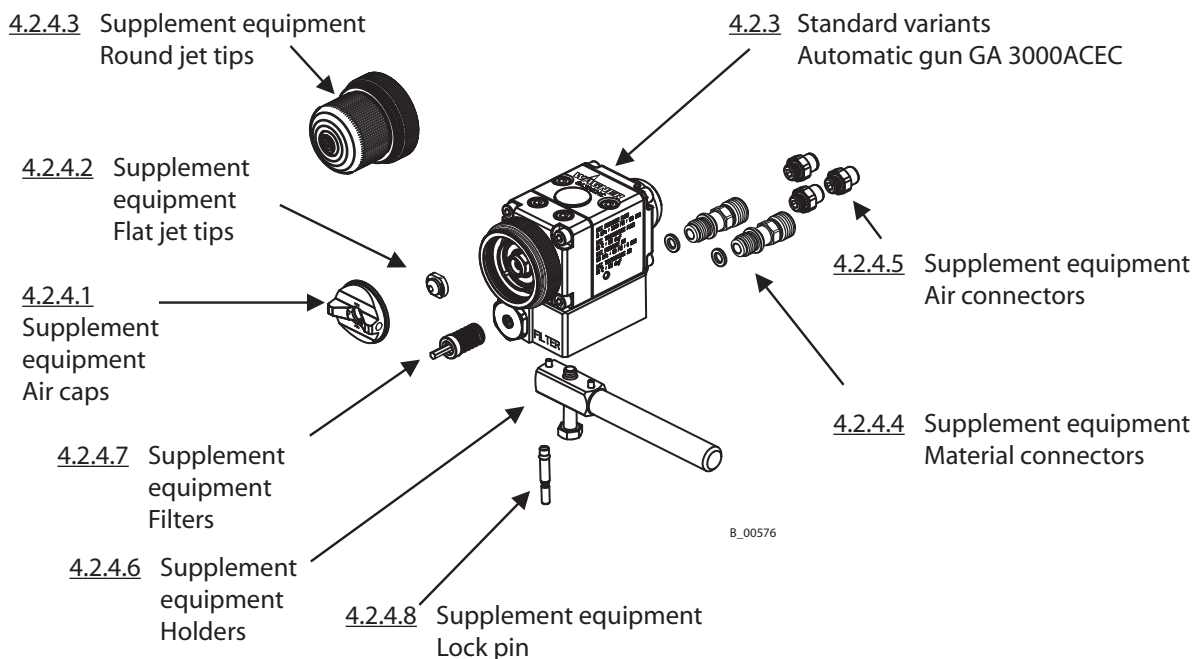
4.2.1 TYPE DESIGNATION

<u>GA</u>	<u>3000</u>	<u>AC</u>	<u>XX</u>	<u>XX</u>
①	②	③	④	⑤

- ① GA = Automatic gun
- ② 3000 = Gun type
- ③ AC = AirCoat spraying system
- ④ IC = Shaping and atomizing air controlled via valve within gun.
EC = Shaping and atomizing air controlled via valve outside of gun.
- ⑤ C = Circulation
NC = No circulation

4.2.2 OVERVIEW

The AirCoat automatic spray gun is composed of standard variant and supplement equipment. Circulation operating mode is possible.



4.2.3 STANDARD-VARIANTS

Part No.	Description
380010	AirCoat automatic gun GA 3000ACEC
380040	AirCoat automatic gun GA 3000ACEC USA
380018	AirCoat automatic gun GA 3000ACEC Robot (suitable for ABB robot)
380048	AirCoat automatic gun GA 3000ACEC Robot USA (suitable for ABB robot)
380019	AirCoat automatic gun GA 3000ACEC Robot (suitable for Fanuc robot)
380049	AirCoat automatic gun GA 3000ACEC Robot USA (suitable for Fanuc robot)

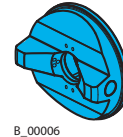
The standard equipment includes:

Quantity						Part No.	Description
380010	380040	380018	380048	380019	380049		AirCoat automatic gun GA 3000ACEC
1	1	1	1	1	1	380850	CE-Declaration of Conformity
1	-	1	-	1	-	380840	Operating manual German
-	1	-	1	-	1	380841	Operating manual English
1	1	1	1	1	1	See chap. 1	An operating manual in the local language

For special versions the delivery note applies.

4.2.4 SUPPLEMENT EQUIPMENT**4.2.4.1 AIR CAPS**

Part No.	Description
364911	Air cap HV (blue) for high viscosity paints
364910	Air cap LV (red) for low viscosity paints



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B_00002

4.2.4.2 AIRCOAT FLAT JET NOZZLES ACF3000

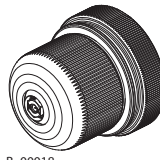
Part No.	Description
379XXX	For a nozzle list look in chapter 8



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4.2.4.3 AIRCOAT ROUND JET NOZZLES ACR3000

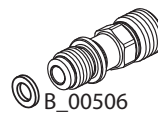
Part No.	Description
371XXX	For a nozzle list look in chapter 8



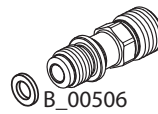
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4.2.4.4 MATERIAL CONNECTORS

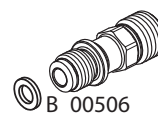
Part No.	Description
380920	Connection nipple M16x1.5 A - G1/4" A assy.
380921	Connection nipple G1/4" A - G 1/4" A assy.
380922	Connection nipple NPSM1/4"-18 A - G1/4" A assy.



B_00506



B_00506



B_00506

4.2.4.5 AIR CONNECTORS

Part No.	Description
9998090	Screw in threaded connection, straight Ø 6 mm - 1/8"; Ø 0.236 inches - 1/8" * Standard
9998993	Screw in threaded connection, straight Ø 8 mm - 1/8"; Ø 5/16" - 1/8"



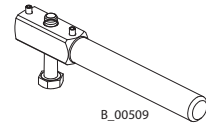
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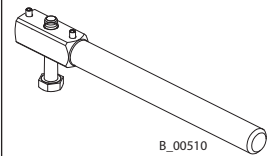
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4.2.4.6 GUN HOLDING DEVICES

Part No.	Description
380940	Holder standard 120 mm, Ø 16 mm; 4.72 inches, Ø 0.63 inches
380941	Holder standard 180 mm, Ø 16 mm; 7.1 inches, Ø 0.63 inches



B_00509



B_00510

4.2.4.7 FILTERS

Part No.	Description
380930	Edge filter 60 meshes
380931	Edge filter 100 meshes
380932	Edge filter 200 meshes



B_00511

4.2.4.8 LOCK PIN

Part No.	Description
380923	Lock pin assy.
380963	Lock pin assy. UV



B_00512

4.3 DATA**4.3.1 TECHNICAL DATA**

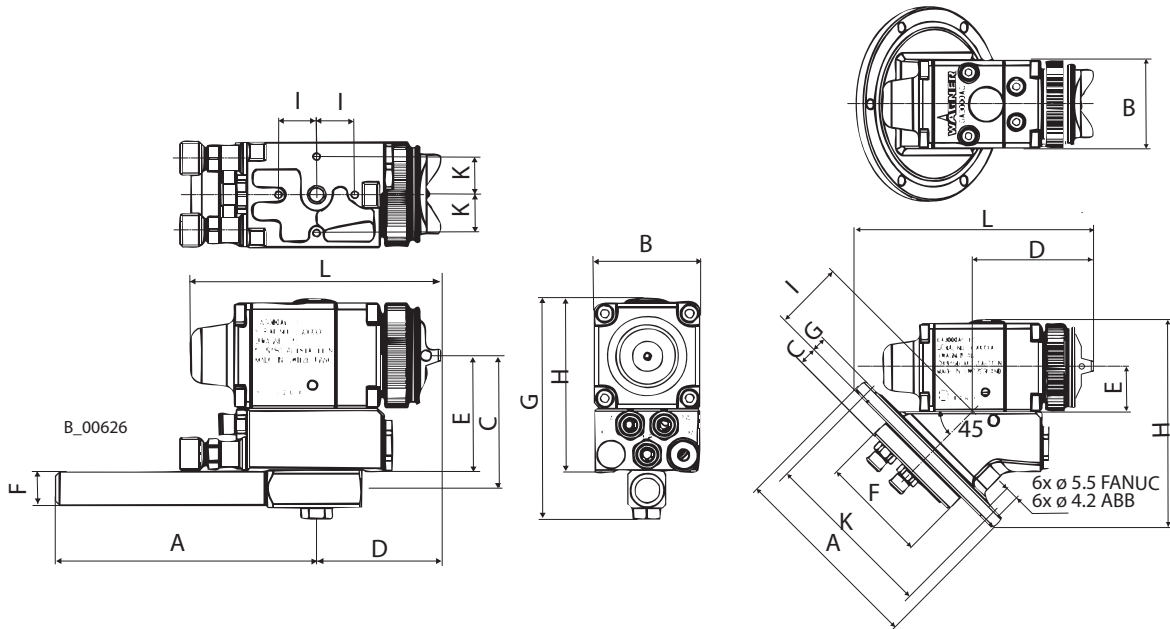
Description	Units	GA 3000AC EC	GA 3000AC EC Robot ABB	GA 3000AC EC Robot FANUC
Maxi. air pressure	bar; psi	6; 87	6; 87	6; 87
Maxi. material pressure	bar; psi	160; 2320	160; 2320	160; 2320
Material flow volume	l/min; cc/min.	*	*	*
Connection nipple (female thread)	Inches	G1/4"	G1/4"	G1/4"
Air connection (female thread)	Inches	G1/8"	G1/8"	G1/8"
Filter (accessory)	Mesh	**	**	**
Weight (standard variant)	g; oz	760; 26.8	1130; 39.9	1130; 39.9
Maxi. temperature material	°C; °F	80; 176	80; 176	80; 176
Maxi. temperature air	°C; °F	50; 122	50; 122	50; 122
Sound level at 0.3 MPa; 3 bar; 43.5 psi air pressure and 11 MPa; 110 bar; 1549 psi material pressure ***	dB(A)	82.0	82.0	82.0
Dimension height (H)	mm; inch	82; 3.23	112.5; 4.43	117; 4.6
Dimension length (L)	mm; inch	122; 4.8	129.5; 5.1	135; 5.31
Dimension width (B)	mm; inch	50; 1.97	50; 1.97	50; 1.97
Dimension (A)	mm; inch	123.5 / 183.5 4.86 / 7.22	∅ 96; ∅ 3.78	∅ 110; ∅ 4.33
Dimension (C)	mm; inch	62.5; 2.46	6; 0.236	10; 0.394
Dimension (D)	mm; inch	59; 2.32	69; 2.71	69; 2.71
Dimension (E)	mm; inch	55; 2.17	25; 0.98	25; 0.98
Dimension (F)	mm; inch	∅ 16; ∅ 0.63	∅ 62.8 ±0,1 ∅ 2.47 ±0.004	∅ 59.8 ±0.1 ∅ 2.35 ±0.004
Dimension (G)	mm; inch	103; 4.06	6; 0.236	8; 0.315
Dimension (I)	mm; inch	18 ±0.1; 0.71 ±0.004	38; 1.5	38; 1.5
Dimension (K)	mm; inch	18 ±0.1; 0.71 ±0.004	∅ 70 ±0.2 ∅ 2.76 ±0.008	∅ 100 ±0.2 ∅ 3.94 ±0.008

* According to nozzle, see chapter 8.1.

** Filter types see chapter 8.4

*** A rated sound pressure level measured in 0.5 m distance according to DIN EN ISO 3746-1995

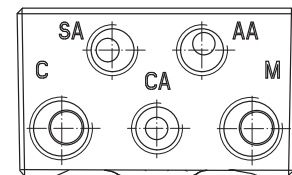
4.3.2 DIMENSIONS AND CONNECTIONS



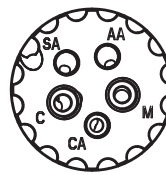
Connections:

Base plate for GA 3000ACEC and Robot

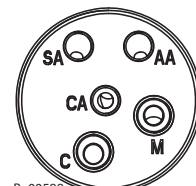
- CA = G1/8" (control air)
- C = G1/4" (material circulation)
- AA = G1/8" (atomizing air)
- M = G1/4" (material)
- SA = G1/8" (shaping air)



GA 3000ACEC



GA 3000ACEC
Robot ABB



GA 3000ACEC
Robot FANUC

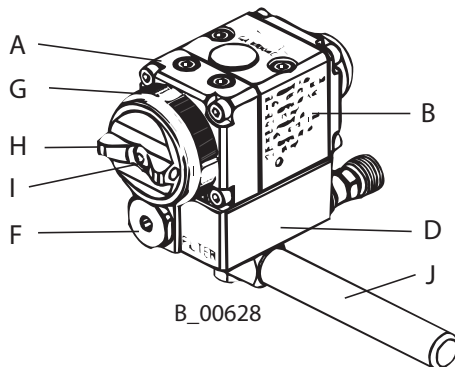
4.3.3 MATERIALS OF PAINT WETTED PARTS

Metal

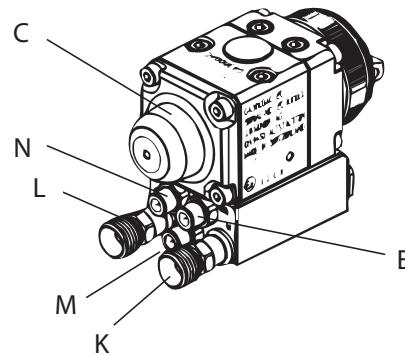
- Tungsten carbide
- Stainless steel 1.4310
- Stainless steel 1.4305
- Stainless steel 1.4104
- Aluminium nickel plated

Plastics

- UHMW-PE
- PTFE
- FPM
- POM
- PA 6.6

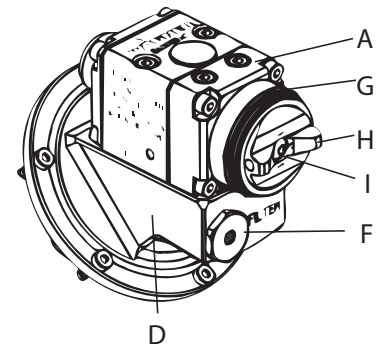
4.4 FUNCTIONAL DESCRIPTION**4.4.1 DESIGN OF SPRAY GUN**

GA 3000ACEC

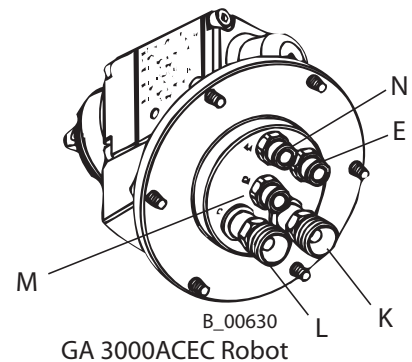


GA 3000ACEC

Description	
Gun head	A
Gun body	B
Actuator jam sleeve	C
Base plate	D
Connection atomizing air (blue)	E
Material filter	F
Union nut	G
Air cap (blue or red)	H
Nozzle	I
Standard gun holder	J
Connection nipple (material)	K
Connection nipple (material circulation)	L
Control air connection (red)	M
Connection fan air (green)	N



GA 3000ACEC Robot



GA 3000ACEC Robot

The device consists of a gun head (A), gun body (B), the drive (C) and a base plate (D). At the gun head (A) is cultivated the appropriate nozzle (I) and diverse sections for the sealing and attachment. In the gun head (A) the material valve and the packing are accommodated. In the pistol body (B) the clamping mechanism for the packing is inserted. The pistol body (B) serves besides as connecting piece between the drive and the drive consists a diaphragm and a compression spring for the material valve. The base plate (C) contains all links (K,L,M) and the material filter (F). It can be used to mount the pistol at a movement device system or at the standard gun holder.

4.4.2 CIRCULATION OPERATING MODE

Retrofitting to circulation operation:

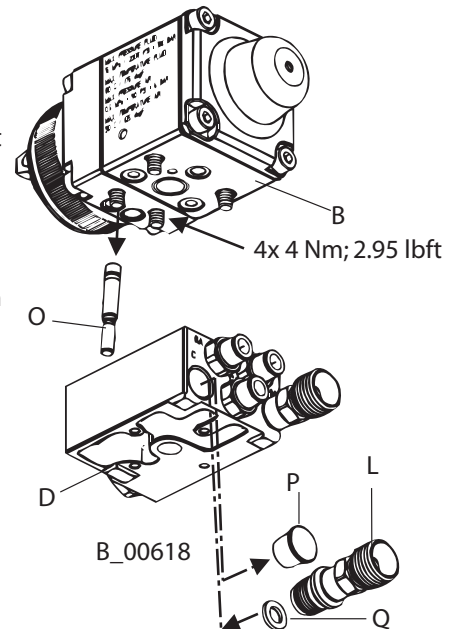
	WARNING
	<p>The plug (P) is under high pressure! The plug can fly off like a projectile</p> <p>→ In NC mode (without material circulation), connect the gun only with the closing pin (O) fitted.</p>

SIHI_0007_GB

1. Detach gun body (B) from base plate (D).
2. Replace stopper (P) with connection nipple (L) and seal (Q).
3. Remove stop pin (O) from gun body.
4. Screw gun body (B) and base plate (D) together. Ensure correct position of seals when doing so.
5. Tighten four screws to 4 Nm; 2.95 lbft.

Note

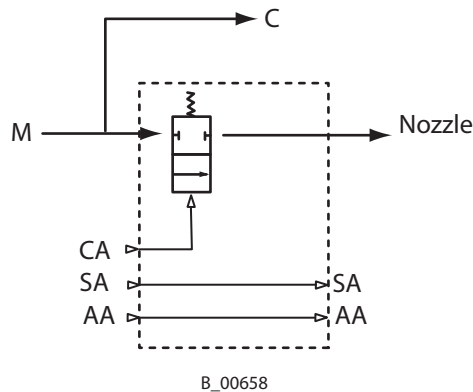
In the C (circulation) operating mode, flow may only occur in the gun from „M“ to „C“.



4.4.3 FUNCTION OF SPRAY GUN

Diagram GA 3000ACEC and Robot

- SA = Shaping air
- AA = Atomizing air
- CA = Control air
- M = Material
- C = Circulation



Open:

First the outside arranged air valve is opened. This ensures that the air valve which releases the shaping and atomizing air is opened first. The material valve is then opened mechanically delayed. In this position, the coating material which is under pressure is applied to the work piece.

Close:

The diaphragm is relieved, and the material valve closes due to the pressure spring which presses against the material valve tappet. The air valve is then closed, again delayed by spring force and mechanically.

Additional functions:

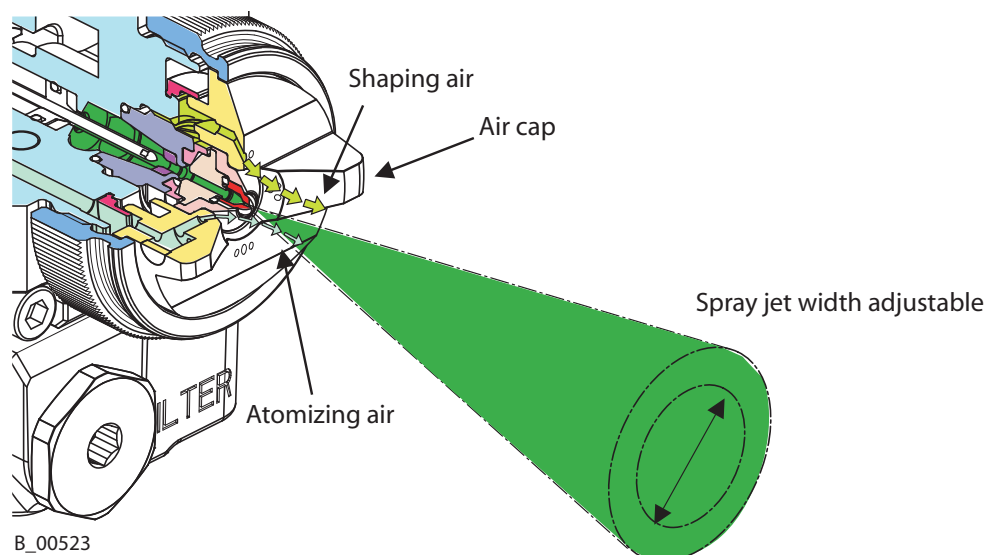
The shaping air throttle is used to regulate the shaping air volume, while the atomizing air is adjusted via an external pressure regulator. Both air flows are supplied separately, which allows them to be set separately.

The disk filter in the material flow prevents contamination from ending up in the tip and thus stopping it up.

The material connections and the colour channels in the base plate are arranged so that several guns can be used in circulation operation.

4.5 JET PROCESS**4.5.1 AIRCOAT FLAT JET PROCESS**

With the AirCoat process the spray material is atomized at a pressure of 3-12 MPa; 30-120 bar; 435-1740 psi. A soft, flat spray is achieved with help of the AirCoat air, which has a pressure of 0.05-0.25 MPa; 0.5-2.5 bar; 7.2-36 psi. The shaping air (C) provides the potential to make the width of the spray jet larger and smaller.

**Advantages**

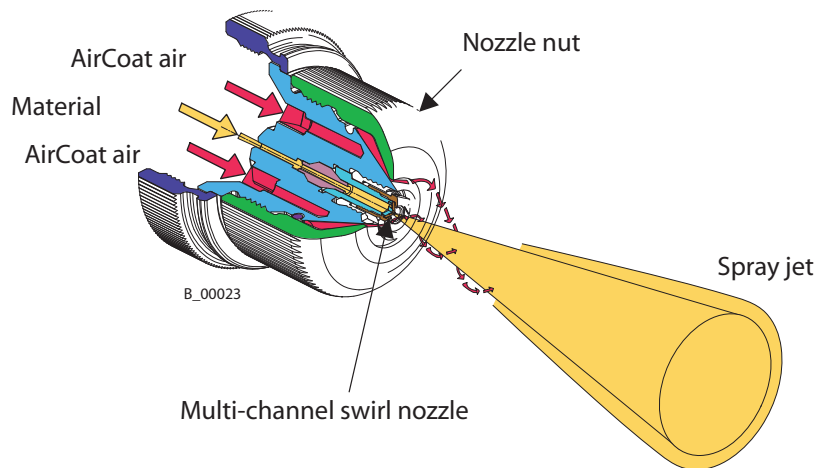
- High painting capacity
- Low mist formation
- Good finish
- High-solids paints can easily be applied
- Adjustable spray fan.

4.5.2 AIRCOAT ROUND JET PROCESS

In the AirCoat process, high pressure of 3-12 MPa; 30-120 bar; 435-1740 psi is used to atomize the material.

The AirCoat air at 0.05-0.25 MPa; 0.5-2.5 bar; 7.2-36 psi produces a soft jet, which largely eliminates the problem of overlapping boundaries.

The spray jet can be adjusted by turning the nozzle nut. The multi-channel swirl nozzle produces fine paint particles, while at the same time reducing their forwards speed and swirling them to produce a rotating motion. The result is a soft, extremely well atomized spraying cloud.



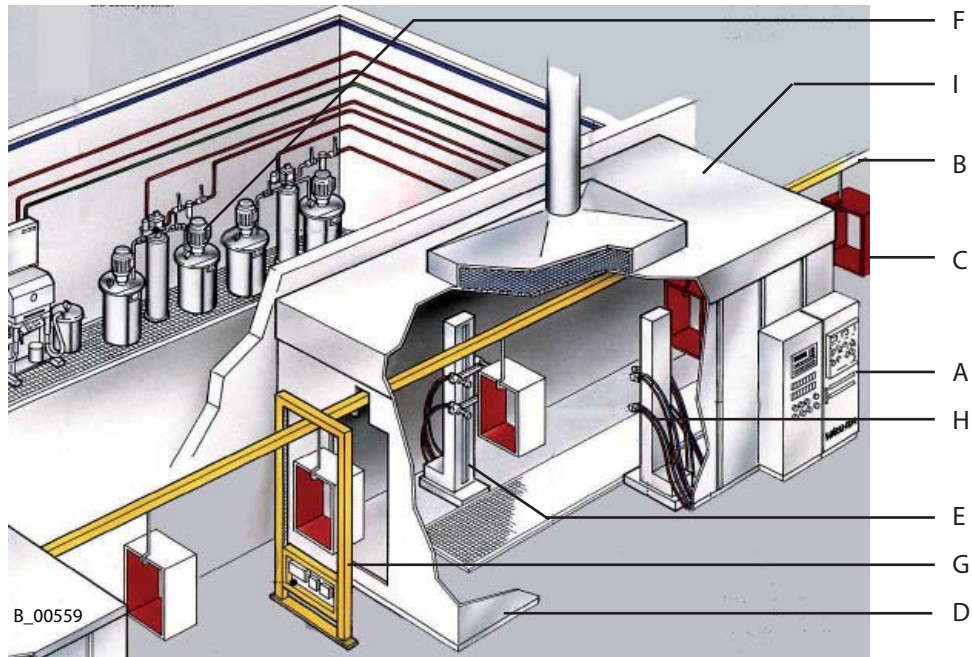
Advantages

- High painting capacity
- Low fogging tendency
- Good finish
- High-viscosity paints can easily be applied

5 START-UP AND OPERATION

5.1 SET UP AND CONNECT

5.1.1 TYPICAL AUTOMATIC INSTALLATION





	Description
A	Control cabinet
B	Conveyer
C	Object
D	Spraying booth
E	Movement device system
F	Paint supply system
G	Part identification
H	Spray guns
I	Gasper air system and exhaust air system

The spray gun must be used a part of an AirCoat spraying system. The AirCoat system shown in the figure is only one example of an AirCoat spraying system. Contact your WAGNER distributor for assistance in designing a system to meet your needs.

The operating instructions and the safety regulations for the additional system components used must be read before starting-up

5.1.2 VENTILATION OF THE SPRAY BOOTH

	 WARNING
	<p>Toxic and/or flammable vapor mixtures! Risk of poisoning and burns</p> <ul style="list-style-type: none"> → Operate the unit in a spraying booth approved for the working materials. <li style="text-align: center;">-or- → Operate the unit on an appropriate spraying wall with the ventilation (extraction) switched on. → Observe national and local regulations for the outgoing air speed.

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5.1.3 AIR SUPPLY

The use of an air filter with the air regulator ensures that only dry, clean atomising air gets into the spray gun. Dirt and moisture in the atomising air reduce the spraying quality and the appearance of the finished piece.

5.1.4 FLUID (PAINT) HOSES



CAUTION
<p>Impurities in the spraying system! Spray gun blockage, materials harden in the spraying system</p> <p>→ Flush the spray gun and paint supply with a suitable cleaning agent.</p>

SIHI_0001_GB



	 DANGER
	<p>Bursting hose, bursting threaded joints! Danger to life from injection of material</p> <ul style="list-style-type: none"> → Ensure that the hose material is chemically resistant. → Ensure that the spray gun, threaded joints and material hose between the unit and the spray gun is suitable for the pressure generated in the unit. → Ensure that the following information can be seen on the high-pressure hose: <ul style="list-style-type: none"> - Manufacturer - Permissible operating pressure - Date of manufacture.

SIHI_0029_GB

5.1.5 EARTHING

	 WARNING
	<p>Discharge of electrostatically charged components in atmospheres containing solvents! Explosion hazard from electrostatic sparks or flames.</p> <p>→ Earth all unit components. → Earth the workpieces being painted.</p>

SIHI_0027_GB

	 WARNING
	<p>Heavy paint mist if earthing is insufficient! Risk of poisoning Insufficient paint application quality</p> <p>→ Earth all unit components. → Earth the workpieces being painted.</p>

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Any material containers and the unit must be connected by a potential equalisation (earth) cable.

5.2 PREPARATION OF PAINTS

The viscosity of the paint is of great importance. The best results are obtained for paints of 80 and 150 mPas.

In most cases, the application of paints of up to 260 mPas for high film-thicknesses does not cause any problems. It is important for the optimal coating quality that the lacquer temperature is kept constant during the coating.

In the case of application problems contact the WAGNER technical adviser and the paint producer.

5.2.1 VISCOSITY CONVERSION TABLE


milli Pascal x Sec mPas	Centipoise	Poise	DIN Cup 4 mm ; 0.16 inch	Ford Cup 4	Zahn 2
10	10	0.1		5	16
15	15	0.15		8	17
20	20	0.2		10	18
25	25	0.25	14	12	19
30	30	0.3	15	14	20
40	40	0.4	17	18	22
50	50	0.5	19	22	24
60	60	0.6	21	26	27
70	70	0.7	23	28	30
80	80	0.8	25	31	34
90	90	0.9	28	32	37
100	100	1	30	34	41
120	120	1.2	33	41	49
140	140	1.4	37	45	58
160	160	1.6	43	50	66
180	180	1.8	46	54	74
200	200	2	49	58	82
220	220	2.2	52	62	
240	240	2.4	56	65	
260	260	2.6	62	68	
280	280	2.8	65	70	
300	300	3	70	74	
320	320	3.2			
340	340	3.4			
360	360	3.6	80		
380	380	3.8			
400	400	4	90		

5.3 START-UP

5.3.1 GENERAL RULES FOR MAKING ADJUSTMENTS TO THE SPRAY GUN

→ See **safety regulations** in chapter 2.

The following rules must be observed before any work is carried out on the equipment or during breaks in work:



	WARNING
	<p>Unintentional putting into operation! Risk of injury</p> <p>Before all work on the unit, in the event of work interruptions and functional faults:</p> <ul style="list-style-type: none"> → Switch off the energy/compressed air supply. → Relieve the pressure from the spray gun and unit. → Secure the spray gun against actuation. → By functional faults: Identify and correct the problem, proceed as described in chap. „Trouble shooting“.

SIHL_0065_GB

CAUTION
<p>Solvent in air conduit! Problems</p> <p>→ By cleaning the spraygun use with min. 0.05 MPa; 0.5 bar; 7.25 psi shaping air. Cleaning solvent must not get into the air ducts.</p>

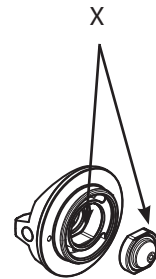
SIHL_0064_GB

5.3.2 PREPARATION

	 WARNING
	<p>The plug (P) is under high pressure! The plug can fly off like a projectile</p> <p>→ In NC mode (without material circulation), connect the gun only with the closing pin (O) fitted.</p>

SIHI_0007_GB

1. Mount the spray gun on the automatic movement system.
2. Connect material hoses to spray gun and to material supply system.
3. Insert suitable edge filter.
4. Place the nozzle into the tip seal. Fit the air cap over the nozzle, ensuring that the location flats (X) are in line. Fit the air cap nut and tighten by hand.
5. Connect control air hose and atomizing air hose to spray gun and to oil-free, dry air supply with regulator. Connect fan air hose.
6. Visually check the permissible pressures for all the unit components.
7. Make sure that the spraying unit and all other conductive parts within the work area are earthed.
8. Set material pressure approx. 10 MPa; 100 bar; 1450 psi and use a suitable medium (solvent or water) to check that connections do not leak.
9. Relieve spray gun and unit pressure.



B_00526

5.4 WORKING

5.4.1 START-UP AIRCOAT SPRAYING

1. Set material pressure to approx. 8 MPa; 80 bar; 1160 psi at material pump.
2. Spray (release trigger safety catch and pull trigger) and check the atomisation.
3. Set the fluid pressure to the point where a further increase in fluid pressure would significantly improve fluid atomization.
4. Now open air on the atomising air regulator and set.
5. Adjust the pressure to get the optimum spraying finish. Relation between spray pattern and shaping air see illustration. Set the minimum air pressure necessary to achieve the best possible spray pattern.

Note:

Repeat point 4 and 5 until the optimum spray pattern is reached

Spray patterns

No shaping air
and atomizing air



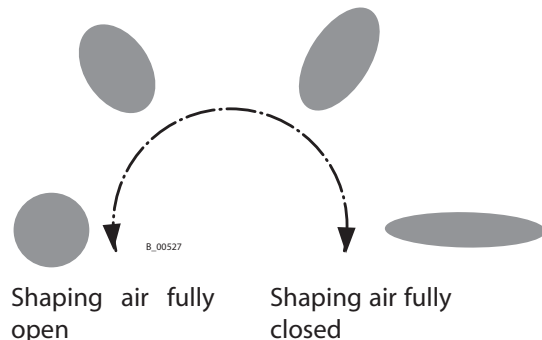
Too little shaping air
and atomizing air



Correct amount of air
B_00071

5.4.2 ADJUSTING THE SPRAY PATTERN

The spray pattern can be adjusted to suit the object being sprayed using the shaping air throttle valve. The illustration below shows the influence of the shaping air regulator on the spraying pattern. Other tip sizes can be used to obtain larger or smaller spraying patterns.

**Note**

The paint output volume can be changed by:

- Changing the material pressure.
- Fitting another flat jet nozzle. See accessories.

5.4.3 CHANGING AIRCOAT NOZZLE**CAUTION****Defective AirCoat nozzle!**

Insufficient paint application quality

→ Do not use sharp-edged objects to treat hard metal on the AirCoat nozzle.

SIHI_0020_GB

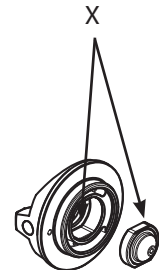
CAUTION**Defective nozzle seal!**

Material sprays into the air cap next to the nozzle
Risk of contamination

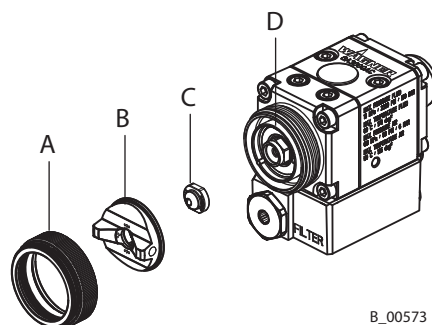
→ Do not clean the nozzle seal with sharp-edged objects.
→ Replace the nozzle seal if the sealing surface is damaged.

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1. Relieve the pressure from the gun and unit.
2. Secure spray gun. (Remove control air hose).
3. Unscrew air cap nut (A).
4. Remove air cap (B) and nozzle (C).
5. Press AirCoat nozzle (C) out of the air-cap by hand and brush with cleaning solvent until all remaining paint has been dissolved.
6. **Assembly:**
Place AirCoat nozzle (C) in tip seal (D).
7. Place air cap (B) on the nozzle (C). Take care that the nozzle fitted is correctly (see flats X).
8. Fit the air cap nut (A) over the air cap (B) onto the spray gun and tighten by hand.



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B_00573

5.4.4 CLEANING AIRCOAT NOZZLES

For disassembly and assembly see AirCoat nozzles section 5.4.3.

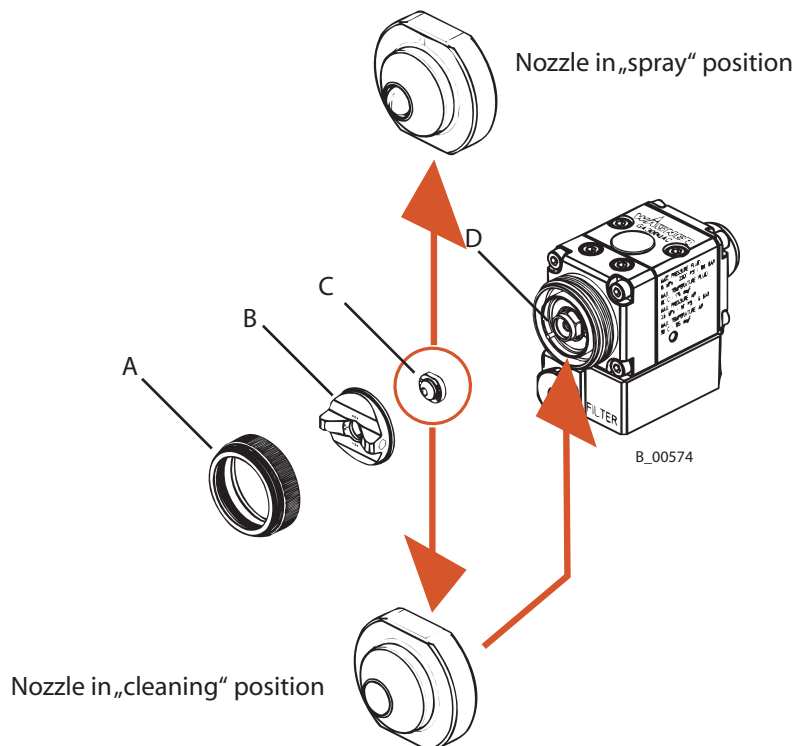
The AirCoat nozzle (C) can be placed into a cleaning solvent which has been recommended by the paint manufacturer.

5.4.5 UNBLOCKING CLOGGED NOZZLE

1. Relieve the pressure from the gun and unit.
2. Secure spray gun. (Remove control air hose).
3. Unscrew air cap nut (A).
4. Remove air cap (B).
5. Pull out the clogged nozzle (C) from the air cap (B), reverse it and replace it into tip seal (D).
6. Place air cap (B) on the nozzle (C). Take care that the nozzle fitted is correctly (see flats X)
7. Fit the air cap nut (A) over the air cap (B) onto the spray gun and tighten by hand.
8. Switch the material pressure back on.
9. Spraying (Connect control air hose).
10. When the blockage has been flushed out secure the spray gun.
11. Relieve the pressure from the gun and unit.
12. Switch off spray gun (Remove control air hose).
13. Unscrew air cap nut (A).
14. Remove air cap (B) and reverse nozzle (C) again.
15. Refit air cap (B) on the nozzle (C). Take care that the nozzle fitted is correctly (see flat side X).
16. Fit the air cap nut (A) over the air cap (B) onto the spray gun and tighten by hand.
17. Connect control air hose. Switch the material pressure and the air pressure back on.



B_00526



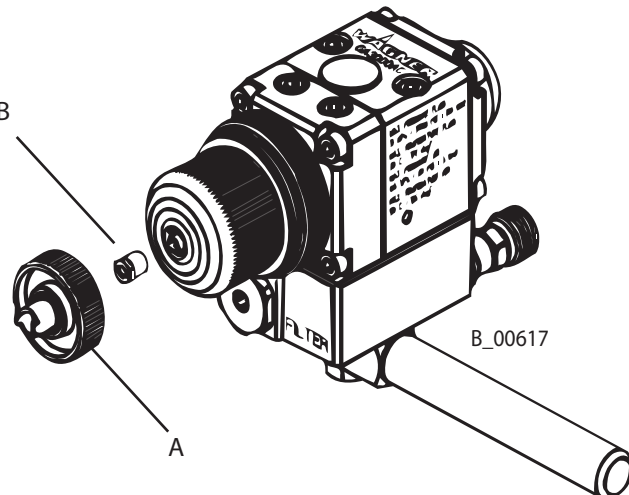
5.4.6 CHANGING AIRCOAT ROUND JET NOZZLE INSERT

1. Relieve the pressure from the gun and unit.
2. Secure spray gun. (Remove control air hose).
3. Remove tip insert (B) with tip spanner (A).
4. Fit desired tip insert (acc. to table 8.3) with tip spanner.

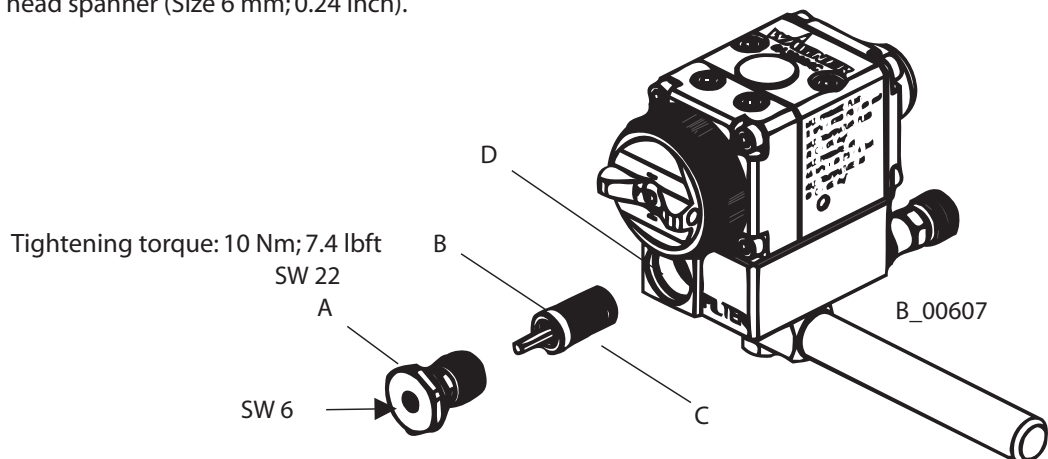
Note:

Cleaning of clogged round jet tips

1. By means of tip spanner (A), loosen tip insert (B) by a half turn.
2. Remove tip spanner and switch on for a short amount of time.
3. After cleaning the tip retighten.

**5.4.7 CHANGING OR CLEANING FILTER**



1. Take spray gun out of operation and clean.
2. Relieve the pressure from the gun and unit.
3. Secure gun. (Remove control air hose).
4. Unscrew filter screw (A) with open ended wrench (Size 22 mm; 0.87 inch) or with hex socket head spanner (Size 6 mm; 0.24 inch).
5. Remove the edge filter (B) and pressure spring (C) from the ground plate (D).
6. Clean the pressure spring (C) and edge , filter (B) with cleaning agent.
7. Fit pressure spring (C) and the cleaned or new edge filter (B) into the ground plate (D)
8. Fit filter screw (A) and tighten with open-ended wrench (Size 22 mm; 0.87 inch) or with hex socket head spanner (Size 6 mm; 0.24 inch).



5.4.8 ADJUSTMENT OF THE PACKING IN THE GUN HEAD

In case paint leaks at the valve rod near the area (C):

1. Relieve the pressure from the gun and unit.
2. Secure spray gun. (Remove control air hose)
3. Replace material with cleaning agent.
4. Remove and clean the AirCoat nozzle.
5. Connect air control hose.

	 DANGER
Exploding gas/ air mixture! Danger to life from flying parts and burns	
→ Never spray into a closed container. → Earth the container.	

SIHI_0008_GB

6. Pressurize the cleaning supply to approx. 4 MPa; 40 bar; 580 psi maxi. and thoroughly flush the spray gun.
7. Relieve spray gun and unit pressure!
8. Tighten the nut (D) carefully by turn maxi. 180° with socket spanner (B) SW 8 mm; 0.31 inch.

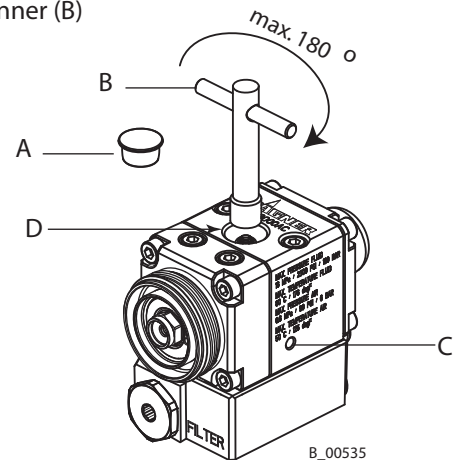
Note:

The valve stem must be easy running.

9. Secure spray gun. (Remove control air hose)
10. Fit nozzle.
11. Connect control air hose. Switch the material pressure and the air pressure back on.
12. If leaking continues, change packing.

Note:

The packing can be retensioned maximally three times.



6 MAINTENANCE

→ See **safety regulations** in chapter 2.

The spray gun and the system must be cleaned every day. Use only the cleaning solvent recommended by the material manufacture.

CAUTION

Impurities in the spraying system!

Spray gun blockage, materials harden in the spraying system

→ Flush the spray gun and paint supply with a suitable cleaning agent.

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CAUTION

Cleaning agent in the air duct!

Functional faults caused by swollen seals

→ Never immerse the spray gun in cleaning agent.

SIHI_0066_GB



WARNING

Incorrect maintenance/repair!

Risk of injury and damage to the equipment

- Repairs and part replacement may only be carried out by specially trained staff or a WAGNER service center.
- Before all work on the unit and in the event of work interruptions:
 - Switch off the energy/compressed air supply.
 - Relieve the pressure from the spray gun and unit.
 - Secure the spray gun against actuation.
- Observe the operating and service instructions when carrying out all work.


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6.1 FINISHING WORK AND CLEANING**CAUTION****Solvent in air conduit!**


Problems

- By cleaning the spraygun use with min. 0.05 MPa; 0.5 bar; 7.25 psi shaping air.
Cleaning solvent must not get into the air ducts.

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	! DANGER
	<p>Exploding gas/ air mixture! Danger to life from flying parts and burns</p> <p>→ Never spray into a closed container. → Earth the container.</p>

SIHI_0008_GB

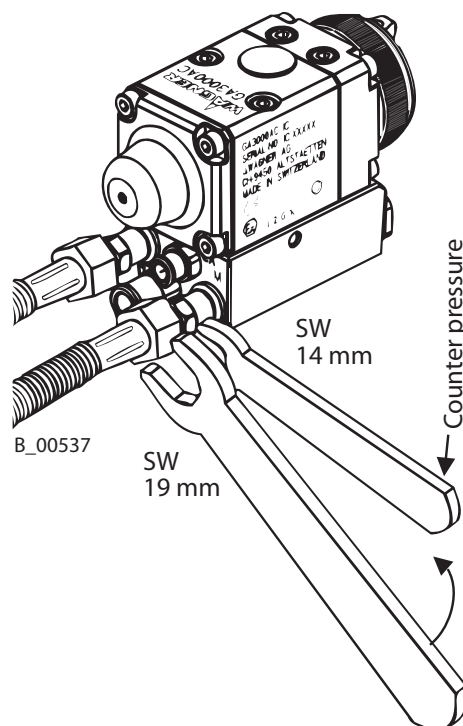
	! WARNING
	<p>Explosive atmosphere! Explosive gases are produced when aluminium comes into contact with halogenized hydrocarbons.</p> <p>→ To clean aluminium, do not use liquids containing halogenized hydrocarbons.</p>

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1. Relieve the pressure from the gun and unit.
2. Secure spray gun. (Remove control air hose).
3. Replace material with cleaning agent.
4. Remove and clean the AirCoat nozzle (see section 5.4.3).
5. Pressurize the cleaning supply to approx. 4 MPa; 40 bar; 580 psi and thoroughly flush the spray gun.
6. Relieve spray gun and unit pressure!
7. Secure spray gun. (Remove control air hose).
8. Clean gun with a cleaning agent recommended by the manufacturer, and dry with a cloth.

6.2 CHANGING MATERIAL HOSE

1. Put out of operation and clean.
2. Relieve the pressure from the gun and unit.
3. Secure gun (Remove control air hose).
4. Place open-ended wrench Size 14 mm; 0.55 inch on flats of paint connection and counter hold.
5. Turn nut to the right with open-ended wrench SW 19 mm; 0.75 inch and unscrew material hose.
6. **Assembly:**
Fit the material hose by hand and tighten with 2 open-ended wrenches 13/19 respectively 17/ 19

**6.3 REPLACING NOZZLE SEAL****CAUTION****Forming air and atomizer air not separate!**

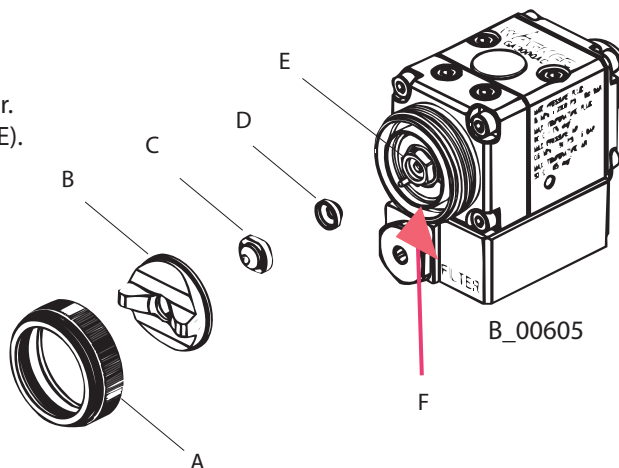
Poor spray pattern

Spray jet cannot be adjusted

→ Treat the distributor seal (F) with care.

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1. Take out of operation and clean.
2. Relieve the pressure from the gun and unit.
3. Secure gun (Remove control air hose).
4. Unscrew air cap nut (A)
5. Remove air cap (B) and nozzle (C).
6. Prise the tip seal (D) out using a small screwdriver.
7. Push the new tip seal into the valve seat holder (E).
8. Re-assemble air cap in reverse order.

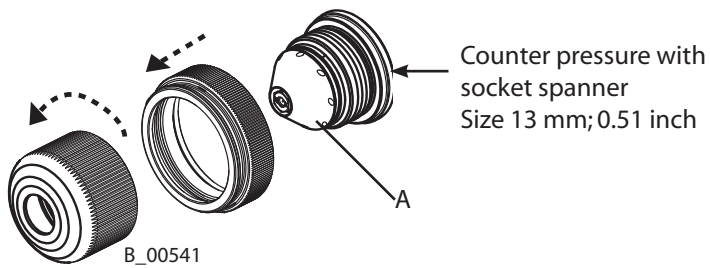
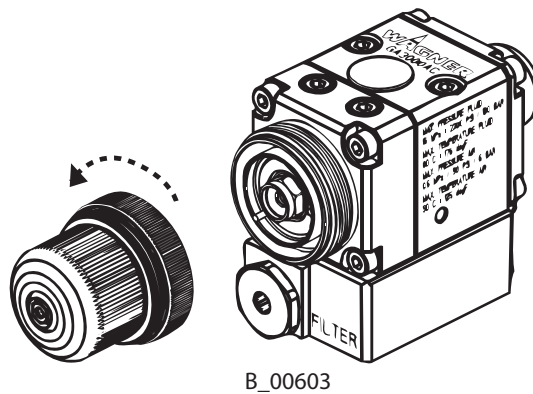


6.4 CHANGING AIRCOAT ROUND JET SEALING NIPPLE

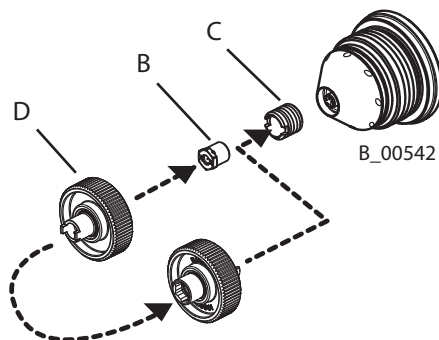
CAUTION
<p>Defective nozzle body! Poor spray pattern</p> <p>→ Handle the nozzle body (A) with care.</p>

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Unscrew nozzle by hand



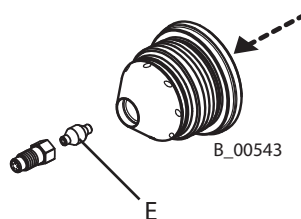
Nozzle spanner (D)
 Part No. 128901



Remove with pin Ø 1.5 mm; 0.06 inch

Note:

The sealing nipple (E) can be unscrewed from the nozzle housing using a small eye wood bolt pushed into it.



6.5 REPLACING PARTS OF THE GUN BODY

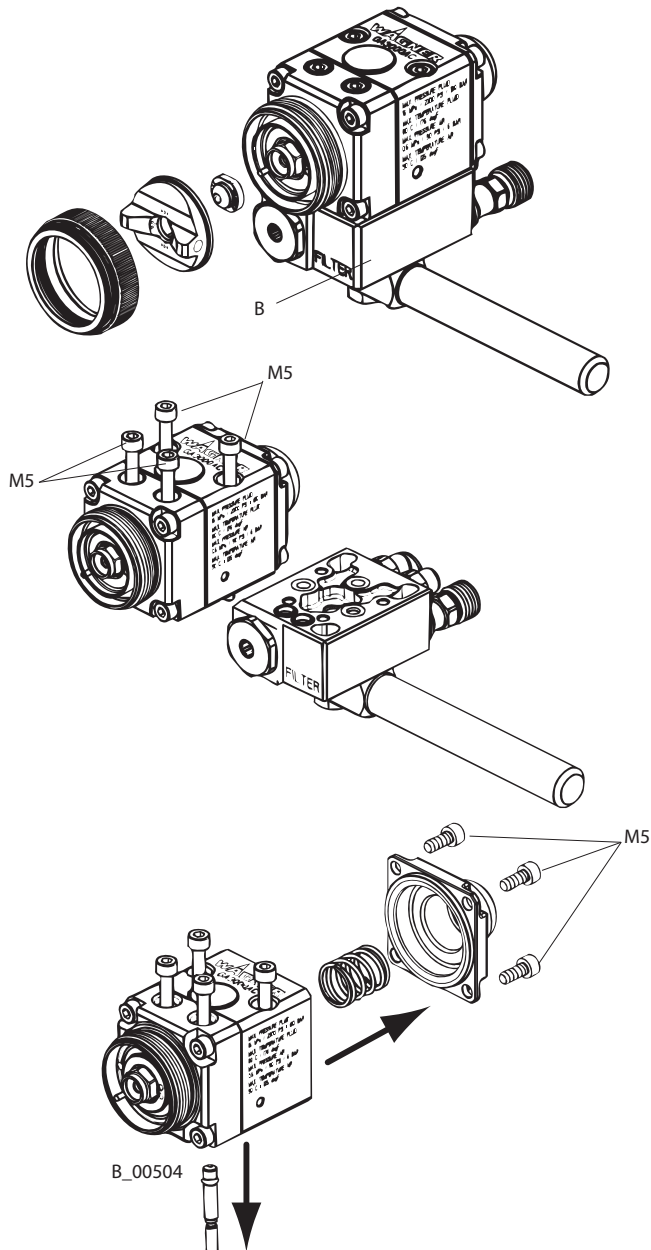
6.5.1 DISMANTLING GA 3000ACEC

<h2>CAUTION</h2>
<p>Defective plunger shaft! Packing leaks. Greater wear on the packing.</p> <p>→ Handle the plunger shaft (K) with care. The plunger shaft has the function of a sliding surface.</p>

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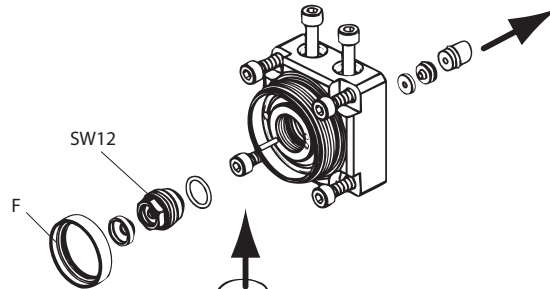
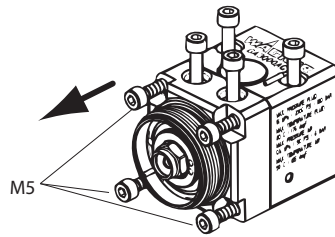
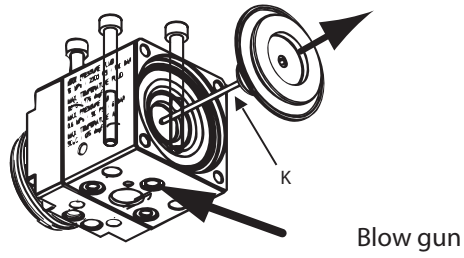
Note:

Base plate assy. (B) must not be dismantled.



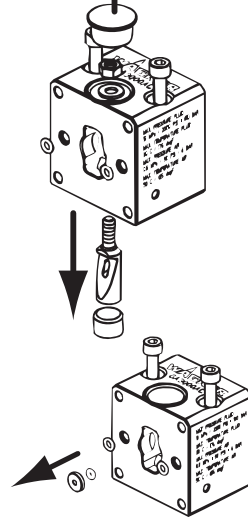
Note:

Circulation mode without pin



Note:
Stuck components can be pushed out with a drift maxi. Ø 3 mm; 0.12 inch.

Note:
Pull the damaged seal (F) out using a pliers.



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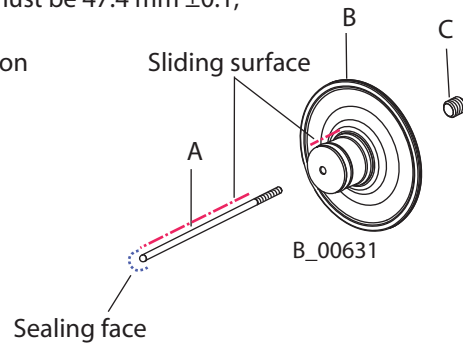
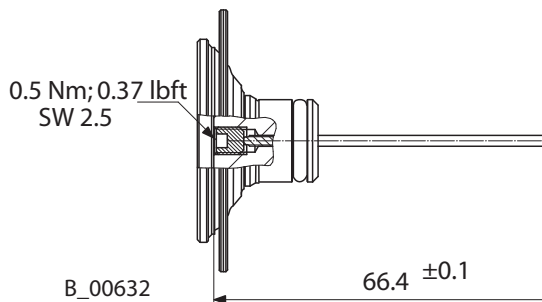
6.5.2 REPLACING VALVE STEM**CAUTION****Defective sealing and sliding surfaces!**

Valve and packing leak
Greater wear on the packing

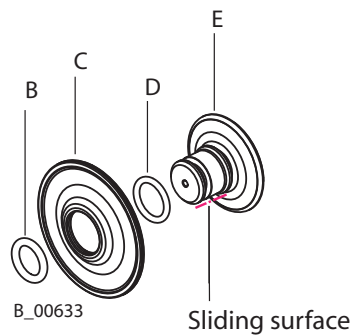
→ Handle the sealing and sliding surfaces with care.

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1. Unscrew default valve stem (A).
2. Screw new valve stem (A) in valve tappet (B). The distance X must be $47.4 \text{ mm} \pm 0.1$;
 $X = 1.866 \text{ in} \pm 0.004$.
3. Hold the distance X in position with threaded pin with hexagon socket head and cone M5.

**6.5.3 REPLACING PARTS IN THE VALVE TAPPET**

1. Cut carefully the faulty parts with a sharp knife and remove its.
2. Press on seal air valve (A).
3. Mount o-ring (D), diaphragm (C) and o-ring (B).



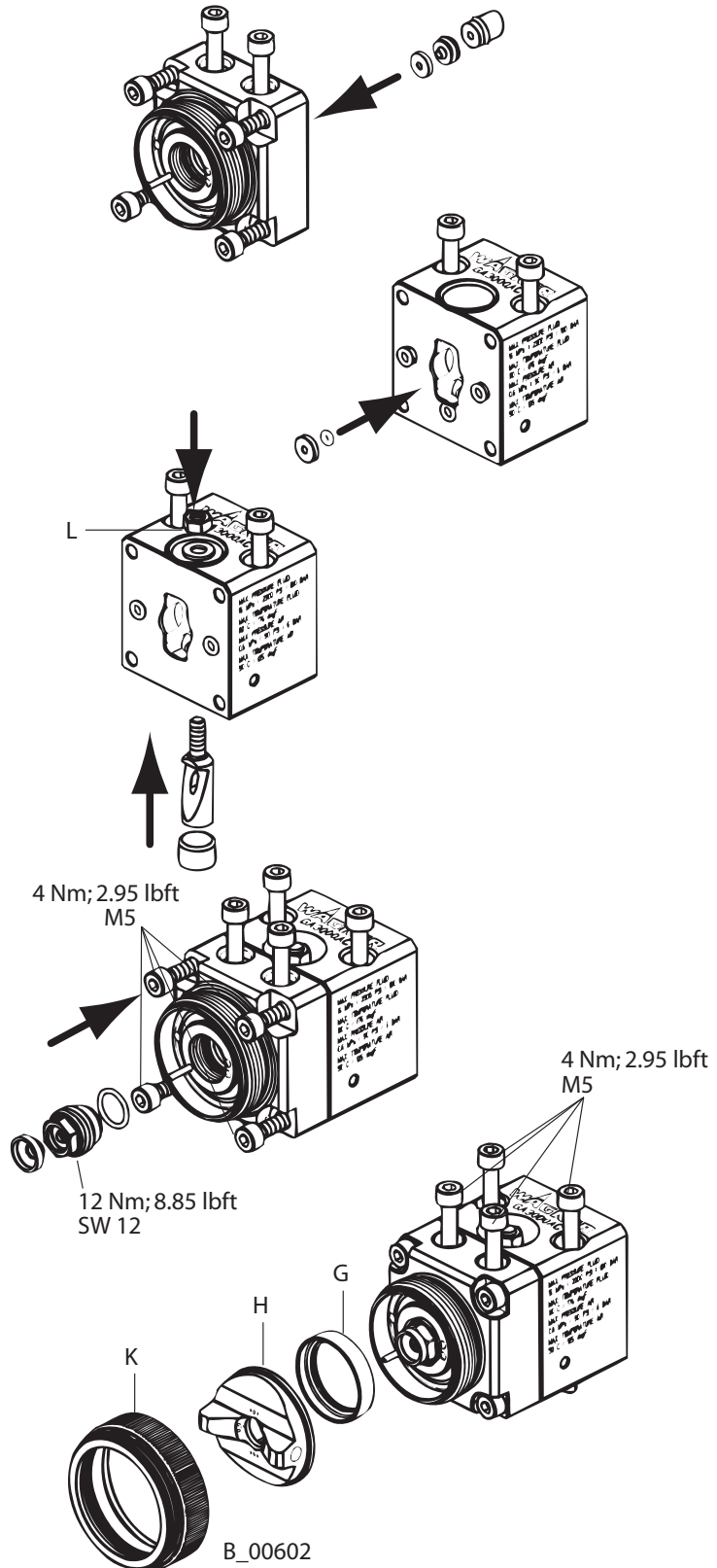
6.5.4 RE ASSEMBLING GA 3000ACEC

General note:

Lightly greased o-rings and sliding surfaces with vaseline white PHV II.



Note:

Apply only the nut, (L) not tighten



Note:

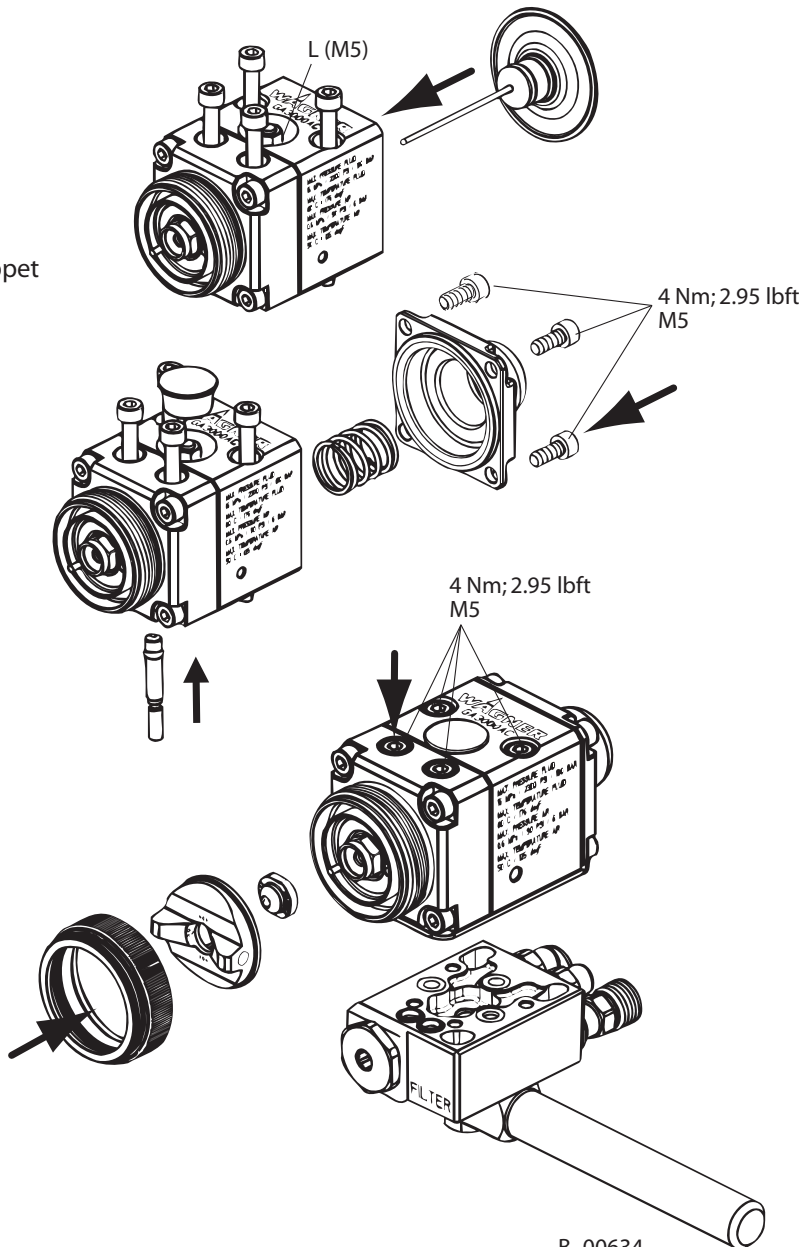
Put the seal (G) on the Air cap (H). Place seal and air cap into gun housing. Screw union nut (K) in as far as the seal ring in the groove catches (snap hearable).

	 WARNING
	<p>The plug (P) is under high pressure! The plug can fly off like a projectile</p> <p>→ In NC mode (without material circulation), connect the gun only with the closing pin (O) fitted.</p>

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Dismount Union nut and air cap.

Note:
Tighten nut (L), that the valve tappet is still easily adjustable



7 TROUBLE SHOOTING AND MAINTENANCE

Problem	Cause	Solution
Paint output to low	Nozzle to small	Select larger nozzle (see chap.8.1)
	Paint pressure to low	Adjust at pump as required
	Gun filter blocked or high pressure filter at pump clogged	Clean/ replace filters (see chap. 5.4.7)
	Nozzle blocked or	Clean nozzle (see section 5.4.5)
	Trigger/ valve stem defective	Replace valve stem
Poor quality spray pattern	Incorrect atomizing air pressure	Re-adjust (see chap. 5.4.1)
	Nozzle to large	Select smaller nozzle (see chap. 8.1)
	Paint pressure to low	Increase pressure at pump
	Material viscosity to high	Thin material acc. to manufacturer's instruction
	Partial nozzle blockage	Clean nozzle (see chap. 5.4.5)
	Incorrect fan air adjustment (fan to wide or to narrow)	Re-adjust fan air control on spray gun
	Air cap faulty (blocked holes, damaged seal)	Clean or replace air cap
Wrong air cap type	Replace as required (high-viscosity / low-viscosity)	
Leaking air valve	Air valve seals damaged	Replace air valve seals (see chap. 6.3)
Leaking packing	Pretension to low	Tighten the taper key
Spray gun will not shut-off correctly Leaking material valve	Worn valve seat / valve ball	Replace as required
	Packing-screw too tight, or packing stuck with dried paint	Loosen clamping wedge and press it downward



8 ACCESSORIES

8.1 AIRCOAT NOZZLES ACF3000



B_00021

Part-No.	Marking	Size mm; inch	Spraying angle	Recommended gunfilter			Application
				red (200 Meshes)	Recommended edge filter		
379107	07/10	0.007-0.18	10°		200 Meshes	200 Meshes	Natural paint
379207	07/20	0.007-0.18	20°	200 Meshes			200 Meshes
379209	09/20	0.009-0.23	20°			200 Meshes	
379309	09/30	0.009-0.23	30°	200 Meshes			200 Meshes
379409	09/40	0.009-0.23	40°			200 Meshes	
379509	09/50	0.009-0.23	50°	200 Meshes			200 Meshes
379609	09/60	0.009-0.23	60°			200 Meshes	
379111	11/10	0.011-0.28	10°	200 Meshes			200 Meshes
379211	11/20	0.011-0.28	20°			200 Meshes	
379311	11/30	0.011-0.28	30°	200 Meshes			200 Meshes
379411	11/40	0.011-0.28	40°		200 Meshes	200 Meshes	
379511	11/50	0.011-0.28	50°	200 Meshes			200 Meshes
379611	11/60	0.011-0.28	60°		200 Meshes	200 Meshes	
379113	13/10	0.013-0.33	10°	100 Meshes			100 Meshes
379213	13/20	0.013-0.33	20°		100 Meshes	100 Meshes	
379313	13/30	0.013-0.33	30°				100 Meshes
379413	13/40	0.013-0.33	40°		100 Meshes	100 Meshes	
379513	13/50	0.013-0.33	50°				100 Meshes
379613	13/60	0.013-0.33	60°		100 Meshes	100 Meshes	
379813	13/80	0.013-0.33	80°				100 Meshes
379115	15/10	0.015-0.38	10°		100 Meshes	100 Meshes	
379215	15/20	0.015-0.38	20°				100 Meshes
379315	15/30	0.015-0.38	30°		100 Meshes	100 Meshes	
379415	15/40	0.015-0.38	40°	100 Meshes			100 Meshes
379515	15/50	0.015-0.38	50°		100 Meshes	100 Meshes	
379615	15/60	0.015-0.38	60°	100 Meshes			100 Meshes
379815	15/80	0.015-0.38	80°		100 Meshes	100 Meshes	
379217	17/20	0.017-0.43	20°	60 Meshes			60 Meshes
379317	17/30	0.017-0.43	30°		60 Meshes	60 Meshes	
379417	17/40	0.017-0.43	40°				60 Meshes
379517	17/50	0.017-0.43	50°		60 Meshes	60 Meshes	
379617	17/60	0.017-0.43	60°				60 Meshes
379817	17/80	0.017-0.43	80°		60 Meshes	60 Meshes	

GA 3000CEC

OPERATING MANUAL

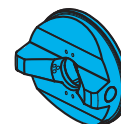


B 00021

Part-No.	Marking	Size inch-mm	Spraying angle	Recommended gunfilter		Application		
				Recommended edge filter				
379219	19/20	0.019-0.48	20°	white (50 Meshes)	yellow (100 Meshes)	Rustproofing paint Latex paint		
379319	19/30	0.019-0.48	30°					
379419	19/40	0.019-0.48	40°					
379519	19/50	0.019-0.48	50°					
379619	19/60	0.019-0.48	60°					
379819	19/80	0.019-0.48	80°					
379221	21/20	0.021-0.53	20°		white (50 Meshes)	yellow (100 Meshes)	Distemper paint Zinc dust coating Rustproofing paint Mica paint	
379421	21/40	0.021-0.53	40°					
379521	21/50	0.021-0.53	50°					
379621	21/60	0.021-0.53	60°					
379821	21/80	0.021-0.53	80°					
379423	23/40	0.023-0.58	40°					
379623	23/60	0.023-0.58	60°			60 Meshes	yellow (100 Meshes)	Distemper paint Zinc dust coating Rustproofing paint Mica paint
379823	23/80	0.023-0.58	80°					
379425	25/40	0.025-0.64	40°					
379625	25/60	0.025-0.64	60°					
379825	25/80	0.025-0.64	80°					
379427	27/40	0.027-0.69	40°					
379627	27/60	0.027-0.69	60°	60 Meshes			yellow (100 Meshes)	Distemper paint Zinc dust coating Rustproofing paint Mica paint
379827	27/80	0.027-0.69	80°					
379429	29/40	0.029-0.75	40°					
379629	29/60	0.029-0.75	60°					
379829	29/80	0.029-0.75	80°					
379431	31/40	0.031-0.79	40°					
379631	31/60	0.031-0.79	60°		60 Meshes		yellow (100 Meshes)	Distemper paint Zinc dust coating Rustproofing paint Mica paint
379831	31/80	0.031-0.79	80°					
379435	35/40	0.035-0.90	40°					
379635	35/60	0.035-0.90	60°					
379835	35/80	0.035-0.90	80°					

8.2 AIR CAPS

Part No.	Description
364911	Air cap HV (blue) for high viscosity paints
364910	Air cap LV (red) for low viscosity paints



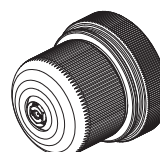
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B_00002

8.3 AIRCOAT NOZZLES ROUND ACR3000

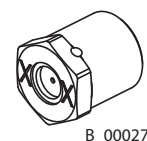
Part No.	Description
371011	Nozzle ACR3000 R11
371012	Nozzle ACR3000 R12
371013	Nozzle ACR3000 R13
371014	Nozzle ACR3000 R14
371015	Nozzle ACR3000 R15
371016	Nozzle ACR3000 R16
371017	Nozzle ACR3000 R17
371018	Nozzle ACR3000 R18
371019	Nozzle ACR3000 R19
371020	Nozzle ACR3000 R20
371021	Nozzle ACR3000 R21
371022	Nozzle ACR3000 R22



B_00018

8.3.1 NOZZLE INSERTS RXX

Part No.	Description	Marking	Jet width **
132720	Nozzle insert R11	11	ca. 250; 9.84
132721	Nozzle insert R12	12	ca. 250; 9.84
132722	Nozzle insert R13	13	ca. 250; 9.84
132723	Nozzle insert R14	14	ca. 250; 9.84
132724	Nozzle insert R15	15	ca. 250; 9.84
132725	Nozzle insert R16	16	ca. 250; 9.84
132726	Nozzle insert R17	17	ca. 250; 9.84
132727	Nozzle insert R18	18	ca. 250; 9.84
132728	Nozzle insert R19	19	ca. 250; 9.84
132729	Nozzle insert R20	20	ca. 250; 9.84
132730	Nozzle insert R21	21	ca. 250; 9.84
132731	Nozzle insert R22	22	ca. 250; 9.84

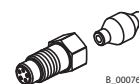


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** Jet width in mm; inch at a distance of 30 cm; 11.8 inches from the object and at a pressure of 10 MPa; 100 bar; 1450 psi, synthetic resin paint, 20 DIN 4 seconds.

8.3.2 NOZZLE SCREW JOINT ASSY.

Part No.	Description
132922	Nozzle screw joint assy.



B_00076

8.4 FILTERS

Part No.	Description
380930	Edge filter 60 meshes
380931	Edge filter 100 meshes
380932	Edge filter 200 meshes



B_00511

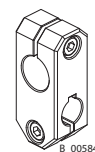
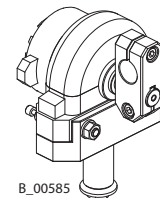
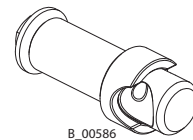
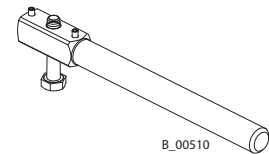
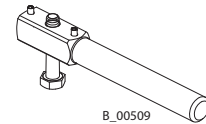
8.5 HOSES

Part No.	Description
9984405	High pressure hose M16x1.5, 1 m; 3.28 ft, DN 4 mm, 27 MPa; 270 bar M16x1.5, 3.28 ft, ID 0.16 inches, 3916 psi
9984507	High pressure hose M16x1.5, 15 m; 49.21 ft, DN 6 mm, 27 MPa; 270 bar M16x1.5, 98.4 ft, ID 0.24 inches, 3916 psi
9984510	High pressure hose M16x1.5, 7.5 m; 24.61 ft, DN 4 mm, 27 MPa; 270 bar M16x1.5, 24.6 ft, ID 0.16 inches, 3916 psi
9984573	High pressure hose NPSM1/4", 7.5 m; 24.61 ft, DN 4 mm, 27 MPa; 270 bar NPSM1/4", 24.6 ft, ID 0.16 inches, 3916 psi
9984574	High pressure hose NPSM1/4", 15 m; 49.21 ft, DN 6 mm, 27 MPa; 270 bar NPSM1/4", 98.4 ft, ID 0.24 inches, 3916 psi
9982035	Air hose red A-ø 6 / I-ø 4 AD 0.236 inches / ID 0.157 inches, polyamide (order by the meter)
9982061	Air hose blue A-ø 6 / I-ø 4 AD 0.236 inches / ID 0.157 inches, polyamide (order by the meter)
9982033	Air hose green A-ø 6 / I-ø 4 AD 0.236 inches / ID 0.157 inches, polyamide (order by the meter)
9982062	Air hose blue A-ø 8 / I-ø 5.5 AD 0.315 inches / ID 0.217 inches, polyamide (order by the meter)

8.6 MISCELLANEOUS

Part No.	Description
380955	Service set GA 3000ACEC
380956	Service set Gun body EC
380957	Service set Base plate EC
9997001	Nozzle cleaning brush
8612001	Nozzle cleaning needle set (12 pieces)
123446	Double nipple M16x1.5 (for extension for material hose)
367560	Double nipple NPSM 1/4" (for extension for material hose)
380940	Standard gun holder 120 mm, Ø 16 mm; 4.72 inches, Ø 0.63 inches
380941	Standard gun holder 180 mm, Ø 16 mm; 7.1 inches, Ø 0.63 inches
380942	Gun holder turnable (standard)
380945	Gun holder turnable 40/40/5
380943	Part-turn valve actuator assy.
380944	Clamping element assy. for part-turn valve actuator

See chapter 9.5



9 SPARE PARTS

9.1 HOW TO ORDER SPARE PARTS?

Always supply the following information to ensure delivery of the right spare part:

Part Number, description and quantity

The quantity need not be the same as the number given in the „Quantity“ column. This number merely indicates how many of the respective parts are used in each subassembly.



The following information is also required to ensure smooth processing of your order:

- Address for the invoice
- Address for delivery
- Name of the person to be contacted in the event of any queries
- Type of delivery required (air freight or mail, sea route or overland route, etc.)

Marks in spare parts lists

Note to column „K“ in the following spare parts lists.

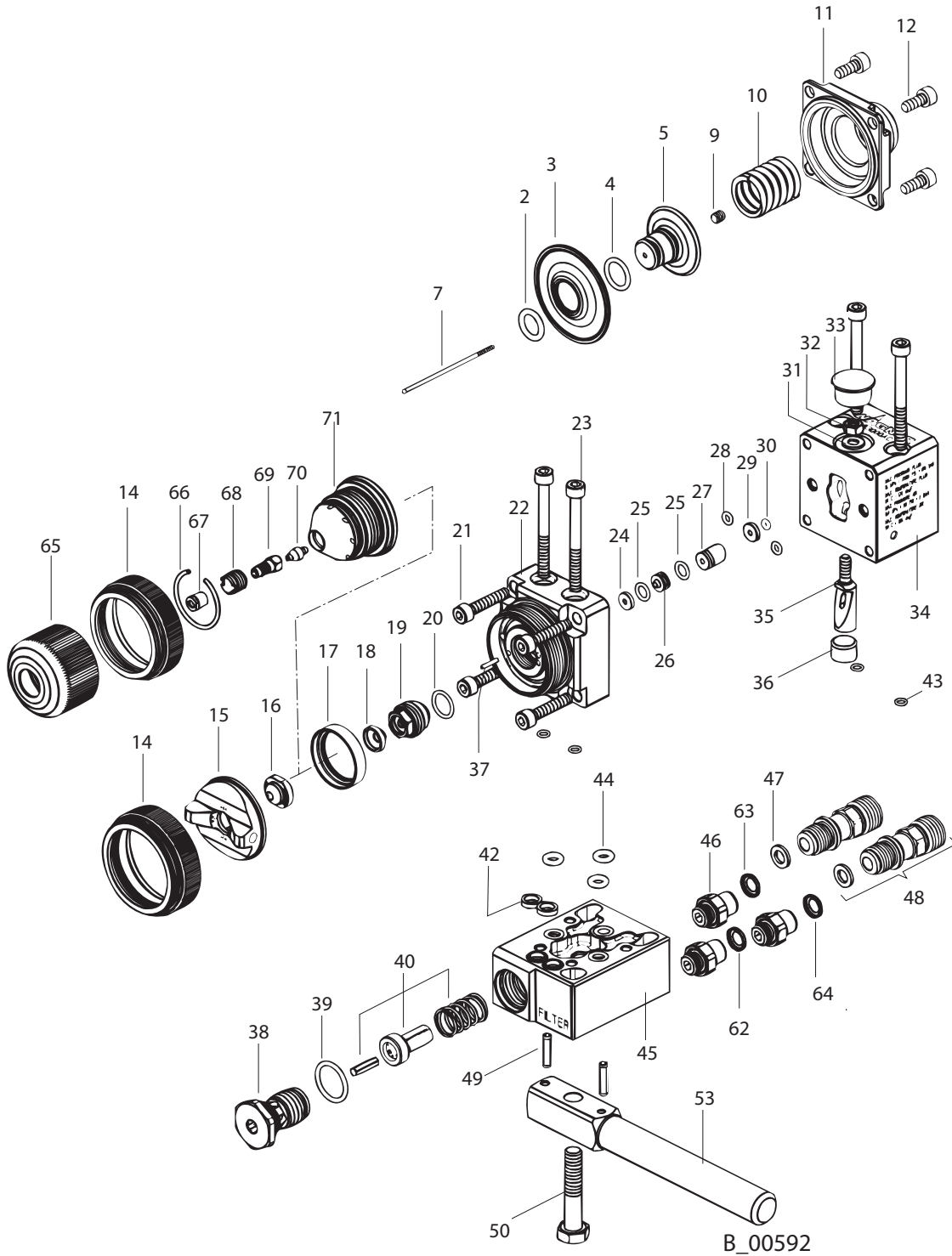
- ◆ = Wearing parts
Note: No liability is assumed for wearing parts
- = Not part of standard equipment, available, however, as additional extra.

	 WARNING
	<p>Incorrect maintenance/repair! Risk of injury and damage to the equipment</p> <ul style="list-style-type: none"> → Repairs and part replacement may only be carried out by specially trained staff or a WAGNER service center. → Before all work on the unit and in the event of work interruptions: <ul style="list-style-type: none"> - Switch off the energy/compressed air supply. - Relieve the pressure from the spray gun and unit. - Secure the spray gun against actuation. → Observe the operating and service instructions when carrying out all work.

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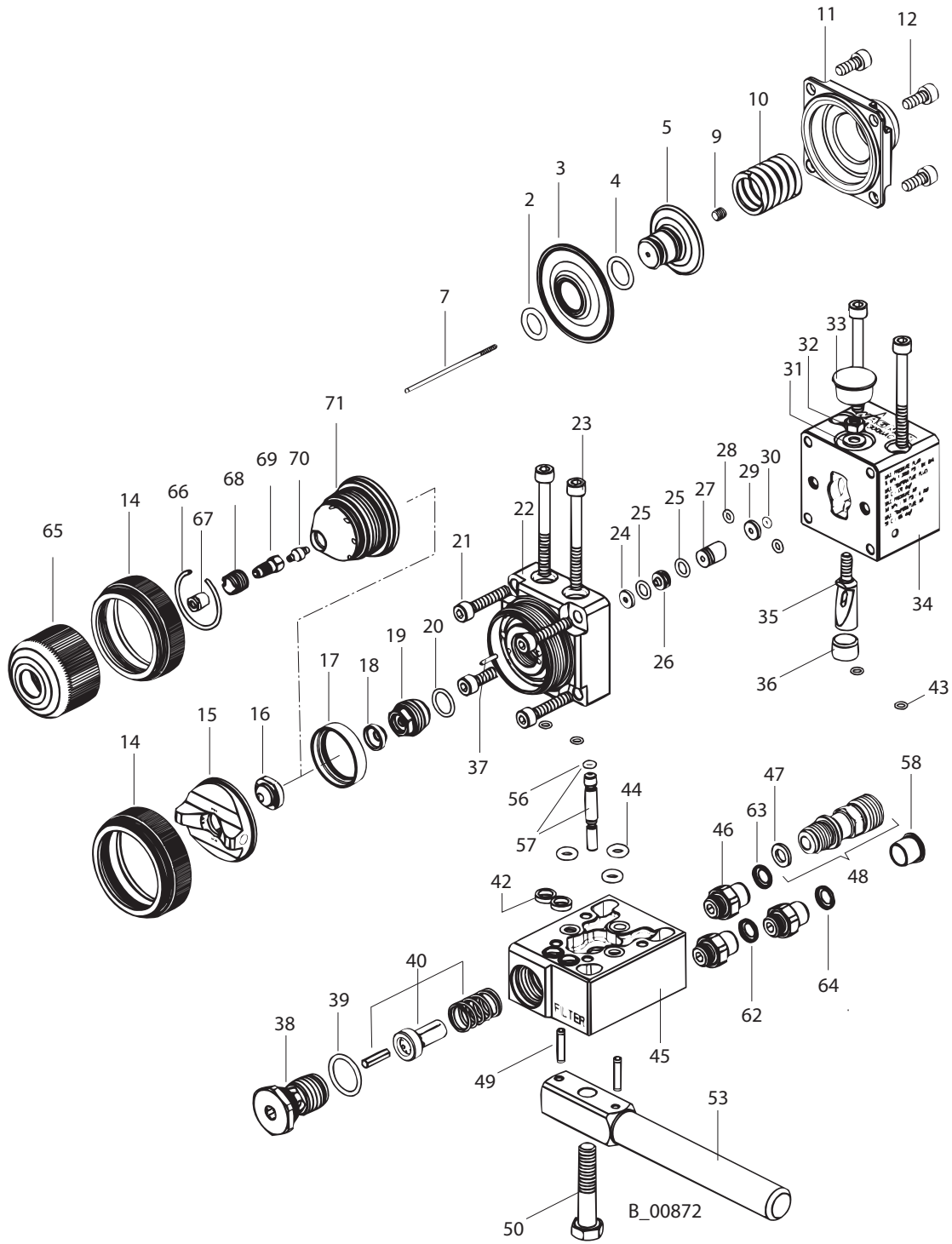


9.2 SPARE PARTS LIST GA 3000ACEC



GA 3000ACEC

OPERATING MANUAL



Spare parts list			GA 3000ACEC C		GA 3000ACEC NC	
Item	K	Description	Qty	Part-No.	Qty.	Part-No.
2	◆	O-ring	1	9974149	1	9974149
3	◆	Diaphragm	1	380306	1	380306
4	◆	O-ring	1	9971313	1	9971313
5		Valve tappet material	1	380402	1	380402
7	◆	Valve stem EC assy.	1	380233	1	380233
9		Threaded pin	1	9935066	1	9935066
10		Pressure spring	1	9998991	1	9998991
11		Jam sleeve	1	380305	1	380305
12		Hex socket head cap screws	4	9907191	4	9907191
14		Union nut	1	364302	1	364302
15	●	Air cap LV (red)	1	364910	1	364910
15	●	Air cap HV (blue)	1	364911	1	364911
16	●	AC3000 nozzles ../.. see chapter 8	1	379../ 371..	1	379../ 371..
17	◆	Seal distributor	1	364301	1	364301
18		Seal nozzle	1	364328	1	364328
19	◆	Valve mounting assy.	1	380225	1	380225
20	◆	O-ring	1	380309	1	380309
21		Hexagon socket head cap screws M5x25 mm; 0.98 inch DIN 912	4	9907192	4	9907192
22		Gun head	1	380304	1	380304
23		Hexagon socket head cap screws M5x50 mm; 1.97 inch DIN 912	4	9907193	4	9907193
24		Support	1	380310	1	380310
25	◆	O-ring	2	9971379	2	9971379
26	◆	Gasket	1	380311	1	380311
27		Pressure piece	1	380312	1	380312
28	◆	O-ring	2	9974153	2	9974153
29		Supporting disk	1	380314	1	380314
30	◆	O-ring	1	9971382	1	9971382
31		Washer A5.3 DIN 125	1	9920101	1	9920101
32		Hexagon nut M5	1	9913046	1	9913046
33		Plug	1	9990623	1	9990623
34		Gun body EC	1	380400	1	380400
35		Taper key	1	380313	1	380313
36		Protection cap	1	9955812	1	9955812
37		Straight pin	1	9930802	1	9930802
38		Material filter screw	1	380316	1	380316
39	◆	O-ring	1	380317	1	380317
40	◆	Edge filter 60 meshes	1	380930	1	380930
40	◆	Edge filter 100 meshes	1	380931	1	380931

◆ = Wear parts

● = Not part of standard equipment for the spray gun, but is available as an optional extra

Service-sets see chapter 9.5

Spare parts list			GA 3000ACEC C		GA 3000ACEC NC	
Item	K	Description	Qty	Part-No.	Qty.	Part-No.
40	◆	Edge filter 200 meshes	1	380932	1	380932
42	◆	Seal material	2	380321	2	380321
43	◆	O-ring	8	9971182	8	9971182
44	◆	O-ring	5	9974148	5	9974148
45		Base plate EC	1	380401	1	380401
46		Straight threaded fitting	3	9998090	3	9998090
47	◆●	Seal nipple	2	380333	1	380333
48	●	Connection piece assy. M16x1.5-G1/4"A	2	380920	1	380920
48	●	Connection piece assy. G1/4"A-G1/4"A	2	380921	1	380921
48	●	Connection piece assy. NPS1/4"-18A-G1/4"A	2	380922	1	380922
49		Pin	1	9935063	1	9935063
50	●	Hex bolt M8x40 mm; 1.75 inches	1	9900241	1	9900241
53	●	Connecting rod 120 mm, Ø 16 mm; 4.72 inches, Ø 0.63 inches	1	380940	1	380940
53	●	Connecting rod 180 mm, Ø 16 mm; 7.1 inches, Ø 0.63 inches	1	380941	1	380941
56	◆	O-ring	-	-	-	9971383
57		Lock pin assy.	-	-	-	380923
58		Plug	-	-	-	9990529
62		Coding ring red	1	9998995	1	9998995
63		Coding ring blue	1	9998901	1	9998901
64		Coding ring green	1	9998994	1	9998994
65	●	Nozzle nut	1	364400	1	364400
66	●	Snap ring	1	9922722	1	9922722
67	◆●	Nozzle insert ACR... (see chapter 8.3.1)	1	132...	1	132...
68	◆●	Nozzle screw joint holder	1	132351	1	132351
69	◆●	Nozzle screw joint assy.	1	132922	1	132922
70	◆●	Sealing nipple	1	128327	1	128327
71	●	Nozzle housing	1	364401	1	364401

◆ = Wear parts

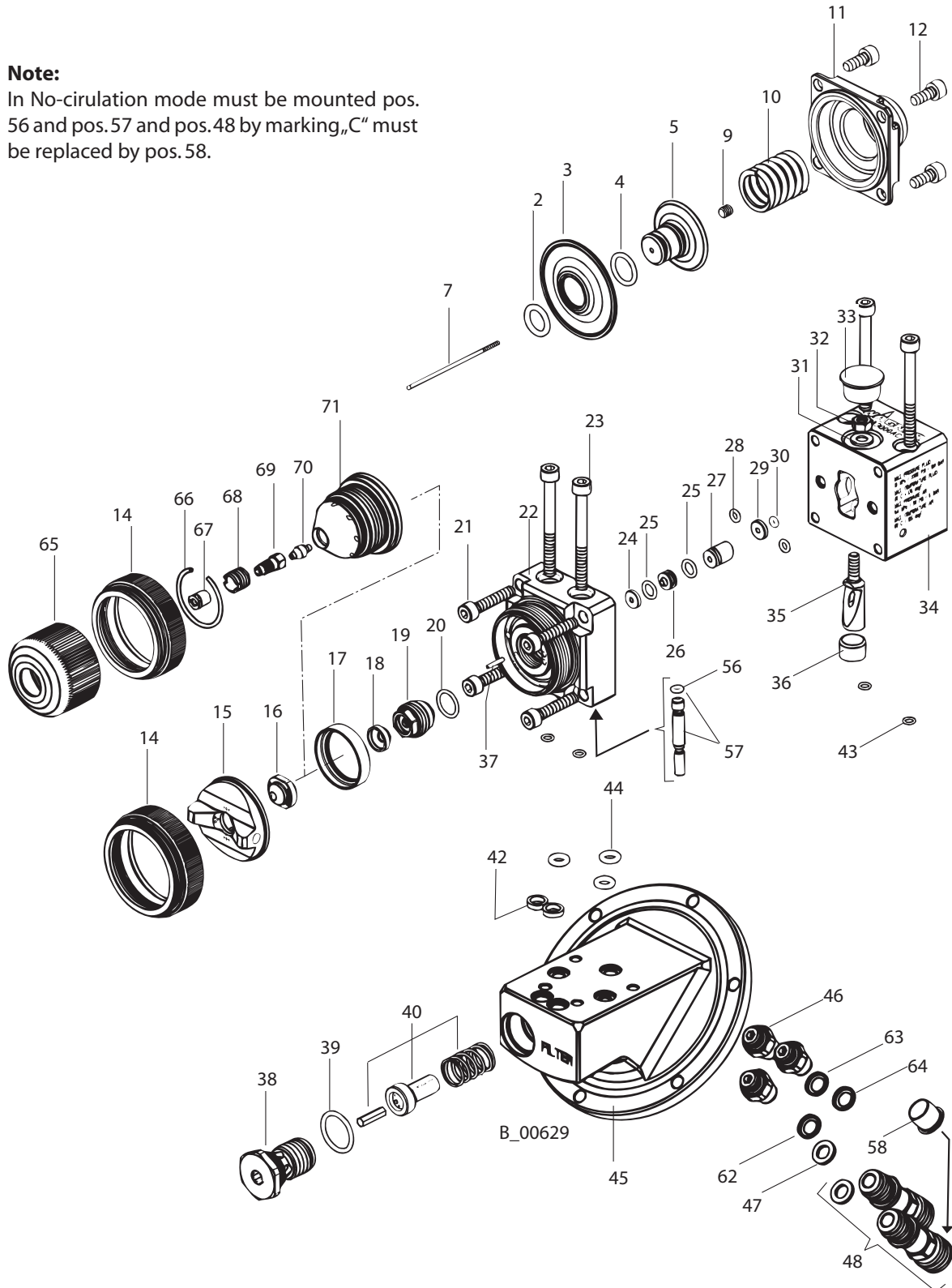
● = Not part of standard equipment for the spray gun, but is available as an optional extra

Service-sets see chapter 9.5

9.3 SPARE PARTS LIST GA 3000AC ROBOT EC FOR FANUC-ROBOT

Note:

In No-circulation mode must be mounted pos. 56 and pos.57 and pos.48 by marking „C“ must be replaced by pos.58.



Spare parts list			Robot EC C		Robot EC NC	
Item	K	Description	Qty.	Part-No.	Qty.	Part-No.
2	◆	O-ring	1	9974149	1	9974149
3	◆	Diaphragm	1	380306	1	380306
4	◆	O-ring	1	9971313	1	9971313
5		Valve tappet material	1	380402	1	380402
7	◆	Valve stem EC assy.	1	380233	1	380233
9		Threaded pin	1	9935066	1	9935066
10		Pressure spring	1	9998991	1	9998991
11		Jam sleeve	1	380305	1	380305
12		Hex socket head cap screws	4	9907191	4	9907191
14		Union nut	1	364302	1	364302
15	●	Air cap LV (red)	1	364910	1	364910
15	●	Air cap HV (blue)	1	364911	1	364911
16	●	AC3000 nozzles ../.. see chapter 8	1	379../ 371..	1	379../ 371..
17	◆	Seal distributor	1	364301	1	364301
18		Seal nozzle	1	364328	1	364328
19	◆	Valve mounting assy.	1	380225	1	380225
20	◆	O-ring	1	380309	1	380309
21		Hexagon socket head cap screws M5x25 mm; 0.98 inches DIN 912	4	9907192	4	9907192
22		Gun head	1	380304	1	380304
23		Hexagon socket head cap screws M5x50 mm; 1.97 inches DIN 912	4	9907193	4	9907193
24		Support	1	380310	1	380310
25	◆	O-ring	2	9971379	2	9971379
26	◆	Gasket	1	380311	1	380311
27		Pressure piece	1	380312	1	380312
28	◆	O-ring	2	9974153	2	9974153
29		Supporting disk	1	380314	1	380314
30	◆	O-ring	1	9971382	1	9971382
31		Washer A5.3 DIN 125	1	9920101	1	9920101
32		Hexagon nut M5	1	9913046	1	9913046
33		Plug	1	9990623	1	9990623
34		Gun body EC	1	380400	1	380400
35		Taper key	1	380313	1	380313
36		Protection cap	1	9955812	1	9955812
37		Straight pin	1	9930802	1	9930802
38		Material filter screw	1	380316	1	380316
39	◆	O-ring	1	380317	1	380317
40	◆●	Edge filter 60 meshes	1	380930	1	380930
40	◆●	Edge filter 100 meshes	1	380931	1	380931

◆ = Wear parts

● = Not part of standard equipment for the spray gun, but is available as an optional extra

Service-sets see chapter 9.5

Spare parts list		Robot EC C		Robot EC NC		
Item	K	Description	Qty.	Part-No.	Qty.	Part-No.
40	◆●	Edge filter 200 meshes	1	380932	1	380932
42	◆	Seal material	2	380321	2	380321
43	◆	O-ring	8	9971182	8	9971182
44	◆	O-ring	5	9974148	5	9974148
45		Base plate EC Robot for FANUC robot	1	380500	1	380500
46		Straight threaded fitting	3	9998090	3	9998090
47	◆●	Seal nipple	2	380333	1	380333
48	●	Connection piece assy. M16x1.5-G1/4"A	2	380920	1	380920
48	●	Connection piece assy. G1/4"A-G1/4"A	2	380921	1	380921
48	●	Connection piece assy. NPS1/4"-18A-G1/4"A	2	380922	1	380922
56	◆	O-ring	-	-	1	9971383
57		Lock pin assy.	-	-	1	380923
58		Plug	-	-	1	9990529
62		Coding ring red	1	9998995	1	9998995
63		Coding ring blue	1	9998901	1	9998901
64		Coding ring green	1	9998994	1	9998994
65	●	Nozzle nut	1	364400	1	364400
66	●	Snap ring	1	9922722	1	9922722
67	◆●	Nozzle insert R... (see chapter 8.3.1)	1	132...	1	132...
68	◆●	Nozzle screw joint holder	1	132351	1	132351
69	◆●	Nozzle screw joint assy.	1	132516	1	132516
70	◆●	Sealing nipple	1	128327	1	128327
71	●	Nozzle housing	1	364401	1	364401

◆ = Wear parts

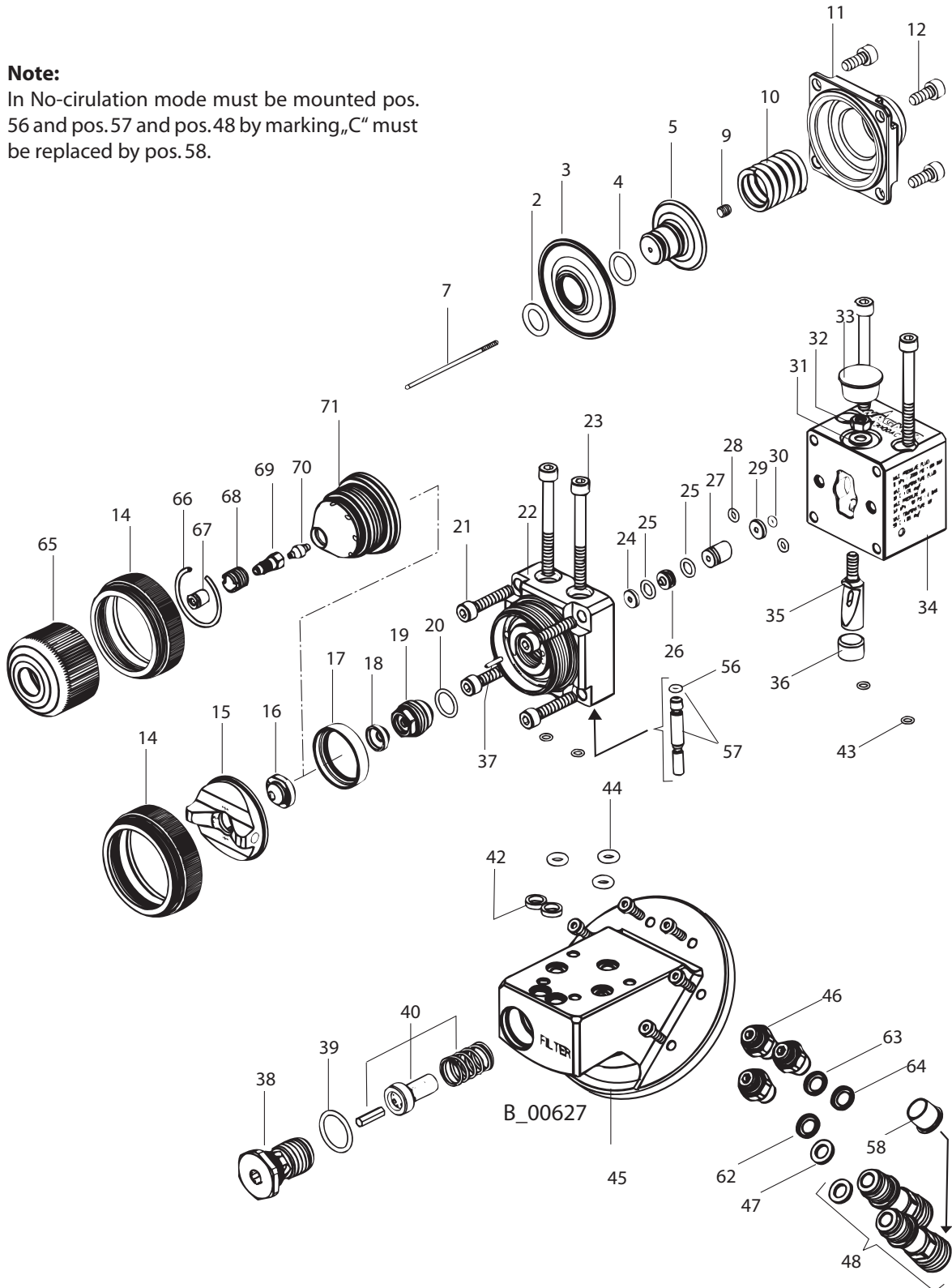
● = Not part of standard equipment for the spray gun, but is available as an optional extra

Service-sets see chapter 9.5

9.4 SPARE PARTS LIST GA 3000AC ROBOT EC FOR ABB ROBOT

Note:

In No-circulation mode must be mounted pos. 56 and pos. 57 and pos. 48 by marking „C“ must be replaced by pos. 58.



Spare parts list			Robot EC C		Robot EC NC	
Item	K	Description	Qty	Part-No.	Qty	Part-No.
2	◆	O-ring	1	9974149	1	9974149
3	◆	Diaphragm	1	380306	1	380306
4	◆	O-ring	1	9971313	1	9971313
5		Valve tappet material	1	380402	1	380402
7	◆	Valve stem EC assy.	1	380233	1	380233
9		Threaded pin	1	9935066	1	9935066
10		Pressure spring	1	9998991	1	9998991
11		Jam sleeve	1	380305	1	380305
12		Hex socket head cap screws	4	9907191	4	9907191
14		Union nut	1	364302	1	364302
15	●	Air cap LV (red)	1	364910	1	364910
15	●	Air cap HV (blue)	1	364911	1	364911
16	●	AC3000 nozzles ../.. see chapter 8	1	379../ 371..	1	379../ 371..
17	◆	Seal distributor	1	364301	1	364301
18		Seal nozzle	1	364328	1	364328
19	◆	Valve mounting assy.	1	380225	1	380225
20	◆	O-ring	1	380309	1	380309
21		Hexagon socket head cap screws M5x25 mm; 0.98 inches DIN 912	4	9907192	4	9907192
22		Gun head	1	380304	1	380304
23		Hexagon socket head cap screws M5x50 mm; 1.97 inches DIN 912	4	9907193	4	9907193
24		Support	1	380310	1	380310
25	◆	O-ring	2	9971379	2	9971379
26	◆	Gasket	1	380311	1	380311
27		Pressure piece	1	380312	1	380312
28	◆	O-ring	2	9974153	2	9974153
29		Supporting disk	1	380314	1	380314
30	◆	O-ring	1	9971382	1	9971382
31		Washer A5.3 DIN 125	1	9920101	1	9920101
32		Hexagon nut M5	1	9913046	1	9913046
33		Plug	1	9990623	1	9990623
34		Gun body EC	1	380400	1	380400
35		Taper key	1	380313	1	380313
36		Protection cap	1	9955812	1	9955812
37		Straight pin	1	9930802	1	9930802

◆ = Wear parts

● = Not part of standard equipment for the spray gun, but is available as an optional extra

Service-sets see chapter 9.5

Spare parts list			Robot EC C		Robot EC NC	
Item	K	Description	Qty	Part-No.	Qty	Part-No.
38		Material filter screw	1	380316	1	380316
39	◆	O-ring	1	380317	1	380317
40	◆●	Edge filter 60 meshes	1	380930	1	380930
40	◆●	Edge filter 100 meshes	1	380931	1	380931
40	◆●	Edge filter 200 meshes	1	380932	1	380932
42	◆	Seal material	2	380321	2	380321
43	◆	O-ring	8	9971182	8	9971182
44	◆	O-ring	5	9974148	5	9974148
45		Base plate EC Robot for ABB Robot	1	380999	1	380999
46		Straight threaded fitting	3	9998090	3	9998090
47	◆●	Seal nipple	2	380333	1	380333
48	●	Connection piece assy. M16x1.5-G1/4"A	2	380920	1	380920
48	●	Connection piece assy. G1/4"A-G1/4"A	2	380921	1	380921
48	●	Connection piece assy. NPS1/4"-18A-G1/4"A	2	380922	1	380922
56	◆	O-ring	-	-	1	9971383
57		Lock pin assy.	-	-	1	380923
58		Plug	-	-	1	9990529
62		Coding ring red	1	9998995	1	9998995
63		Coding ring blue	1	9998901	1	9998901
64		Coding ring green	1	9998994	1	9998994
65	●	Nozzle nut	1	364400	1	364400
66	●	Snap ring	1	9922722	1	9922722
67	◆●	Nozzle insert R... (see chapter 8.3.1)	1	132...	1	132...
68	◆●	Nozzle screw joint holder	1	132351	1	132351
69	◆●	Nozzle screw joint assy.	1	132516	1	132516
70	◆●	Sealing nipple	1	128327	1	128327
71	●	Nozzle housing	1	364401	1	364401

◆ = Wear parts

● = Not part of standard equipment for the spray gun, but is available as an optional extra
Service-sets see chapter 9.5

9.5 SERVICE-SETS AND SPARE PARTS ASSEMBLIES

Part-No.	Description	Consisting of spare parts positions
380910	Gun body EC assy	2, 3, 4, 5, 7, 9, 10, 11, 12, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 43
380911	Base plate EC assy.	38, 39, 42, 44, 45, 46, 62, 63, 64
380912	Valve tappet material EC assy.	2, 3, 4, 5, 7, 9,
380913	Valve stem EC assy.	7
380914	Valve stem material pre-assembled	2, 3, 4, 5
380920	Connection nipple M16x1.5A-G1/4"A assy.	48 (incl. 47)
380921	Connection nipple G1/ 4"A-G1/4"A assy.	48 (incl. 47)
380922	Connection nipple NPSM1/4"-18A-G1/4"A assy.	48 (incl. 47)
380923	Lock pin assy.	57 (incl. 56)
380930	Edge filter 60 mesh assy.	40
380931	Edge filter 100 mesh assy.	40
380932	Edge filter 200 mesh assy.	40
380940	Holder standard 120 mm, Ø 16 mm; 4.72 inches, Ø 0.63 inches	49, 50, 53
380941	Holder standard 180 mm, Ø 16 mm; 7.1 inches, Ø 0.63 inches	49, 50, 53
380955	Service set GA 3000ACEC	2, 3, 7, 17, 18, 19, 20, 25, 26, 28, 30, 39, 42, 44
380956	Service set gun body EC assy.	2, 7, 17, 18, 19, 20, 25, 26, 28, 30,
380957	Service set base plate EC assy.	39, 42, 44
380990	Base plate EC robot assy. FANUC	38, 39, 42, 44, 45, 46, 62, 63, 64
380991	Base plate EC robot assy. ABB	38, 39, 42, 44, 45, 46, 62, 63, 64

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