




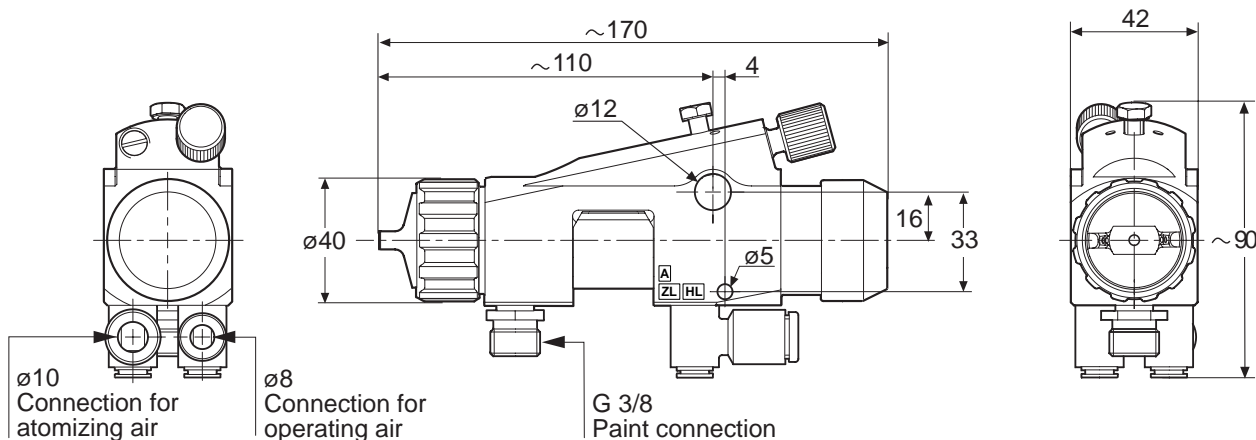
Nozzle combinations

 Paint nozzle			 Paint needle		 Air cap	
Orifice diameter mm	Stainless steel Designation	Part number	Stainless steel Designation	Part number	Designation	Part number
0.6	G0.6	6003 9206 00	A001 HA001 ^b	6003 5810 00 6003 9593 00	6509	6003 9232 00
0.8	G0.8	6003 9208 00				
0.9	G0.9	6003 9209 00				
1.1	G1.1	6003 9211 00	A001 HA001 ^b	6003 5810 00 6003 9593 00	6511	6003 9235 00
1.2	G1.2	6003 9212 00	A01 HA01 ^b	6003 5786 00 6003 6563 00	6514 T6578 T6578	6003 9237 00 6003 9578 00 6003 9579 00^c
1.4	G1.4	6003 9214 00				
1.4	GH1.4 ^a	6003 9650 14				
1.6	G1.6	6003 9216 00	A01 HA01 ^b	6003 5786 00 6003 6563 00		
1.8	G1.8	6003 9218 00	A01 HA01 ^b	6003 5786 00 6003 6563 00	6518	6003 9239 00
1.8	GH1.8 ^a	6003 9650 18				
2.1	G2.1	6003 9221 00	A01 HA01 ^b	6003 5786 00 6003 6563 00	6521	6003 9242 00
2.1	GH2.1 ^a	6003 9650 21				
2.7	G2.7	6003 9227 00	A01 HA01 ^b	6003 5786 00 6003 6563 00	6527	6003 9246 00

^a The letter "H" before the figures (e.g., H1.4) denotes tungsten-carbide design.

^b The letter "H" before the designation denotes tungsten-carbide design tip.

^c Acetal plastic retaining ring.



Measurements in millimetres

65130F219

Operator's Instructions

- Use Ecco genuine parts and accessories only for best function and safety.
- Before starting, read through **all instructions** carefully.

HVLP High Volume Low Pressure.

Air spray guns used for spraying of liquids under low pressure and low atomizing air pressure.

Principal data

Type	Max. working pressure bar	Min./Max. control air pressure bar	Atomizing air pressure bar
Ecco			
65AS	7	4/7	3

Important



WARNING

Do not use halogenated hydrocarbons in coating application equipment where aluminium or galvanized parts come in contact with the solvent or coating material. Halogenated hydrocarbons e.g. 1,1,1-trichloroethane and methylene chloride react, violently with such parts, causing corrosion and danger for explosion.



WARNING

The high velocity flow of air and liquids through hoses and nozzles may develop static electricity. Be sure that the equipment, object being sprayed, spraybooth, paint and waste container are properly grounded to prevent static discharge or sparks.



WARNING

As the equipment works under pressure the utmost care must be observed during the work. Bearing this in mind, never aim the spray gun at a person or towards any part of the body. In the event of personal injury caused by the spraying pressure, immediate medical attention is essential. Before carrying out any adjustment or repair, the equipment must be switched off and the paint pressure relieved.

Paint spraying



CAUTION

Inhalation of paint, paint dust and solvent is not healthy. Make sure an approved spraybooth is used. The operator must use personal protection-breathing mask or fresh air hood.

Operation

- Install and operate the spray gun according to fig. 1.
- Blow the paint and air hoses clean before connection.
- Check that all connections are tight.
- Keep the spray gun clean and lubricate moving parts at regular intervals.
- Lubricants for surface-treatment equipment must **not** contain silicon.
- In the event of leakage around the paint needle, tighten the packing screw (16 fig 2). After tightening, check that fluid needle is pushed forward by the spring force.
- For short standstill periods, for instance over a night, it will suffice to clean the air and paint nozzles on the outside. If a two-component paint is used, however, the gun **must be flushed through immediately** with solvent. This must also be done if the gun is to remain unused for a longer period of time.
- When cleaning the air cap and the paint nozzle, use a soft brush or rag dipped in solvent. Do not place the entire gun in solvent, as the oil on the lubricated parts would be dissolved. Blow the air cap dry with compressed air from both sides.
- Never use iron or steel wire to clean air holes and ducts in the nozzles.
- When assessing the reaction time of the connected spray gun (the time from the start impulse until spraying commences) the reaction time of the control valve must be taken into consideration.
- Recommend size for control valve:
 - Control valve, 3-way, G 1/4. Min. flow area 28 mm². Mechanically, pneumatically or electrically actuated.

How to operate

Note:

Valve orifice inside three-way solenoid valve should be minimum \varnothing 4 mm and also operating air hose length should be within 10 m with the inner diameter more than \varnothing 6 mm to avoid delayed operation and any kind of failure.

Recommended paint viscosity differs according to paint properties and painting conditions. 15 to 23 sec./Ford cup 4 is recommendable.

The gun is operate at low air pressure, high transfer efficiency will not be obtained if the spray distance is too far.

Set the spray distance from the gun to the work piece as near as possible within the range of 150-200 mm.

For further interesting please contact your supplier.

Air caps

The air caps are tested and certified according to the SEAVA method. This gives a "finger print" of the spray pattern on each air cap. For further information please contact your supplier.

The retaining ring for the air cap shall only be tightened with hand force. No tools are required. Especially important when a capcleaner is used.

Air caps can be sent back for checking and comparity the performance.

Connections and controls (see fig. 1)

3 Paint hose connection.

Hose: Inside dia. 6.3 mm (1/4") or 9.5 mm (3/8").

6 Fan width adjusting. If the knob is screwed all the way in a round fan will be obtained other positions give broad fans.

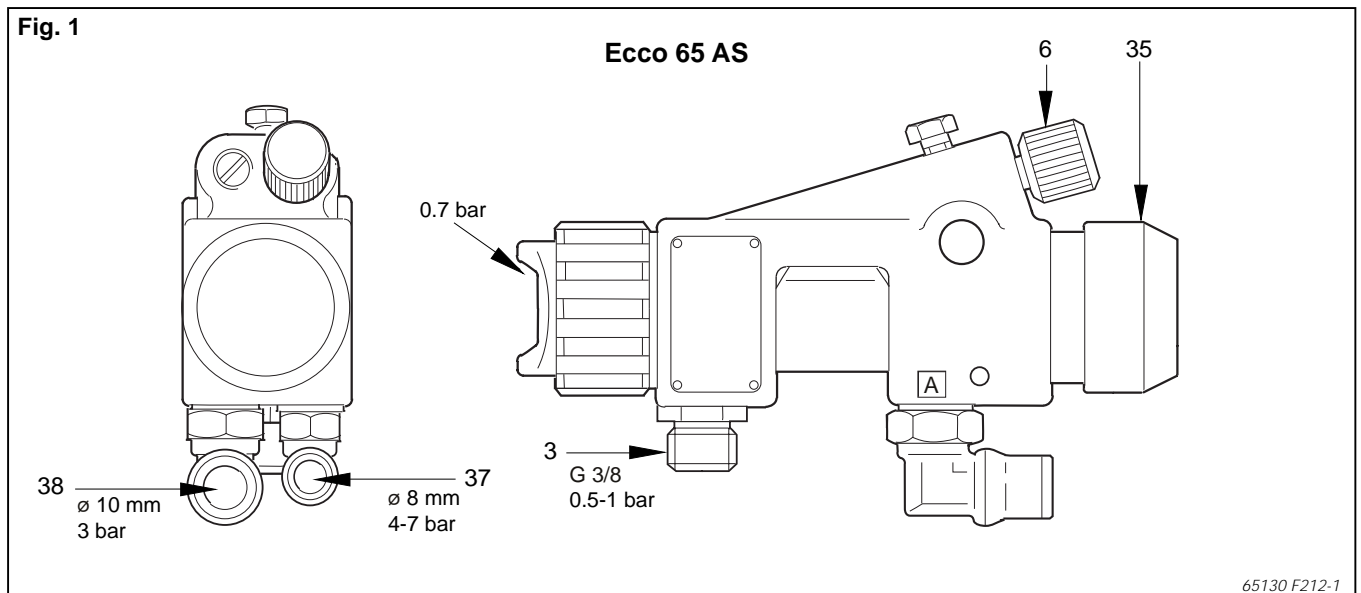
35 Paint flow adjusting. Clockwise turning result in a smaller paint flow and counter-clockwise turning increases the flow. The fluid flow is regulated in the first instance by the choice of paint nozzle and paint pressure.

37 C= Control air hose connection.

Hose: Nylon tube \varnothing 6/8 mm, max. length 7.5 m.

38 A= Atomizing air hose connection.

Hose: Nylon tube \varnothing 8/10 mm.



Disassembly-Reassembly (see fig. page 1)

(see also fig. 2)



VARNING

Before any intervention on the spray gun, shut off the compressed air supply and depressurize the by controlling the opening of the spray gun.

Before reassembling the different components:

- Clean the parts with the appropriate cleaning agent by means of brush.
- Install new seals after having lubricated them with PTFE grease.
- Install new parts if necessary.

Needle packing and needle

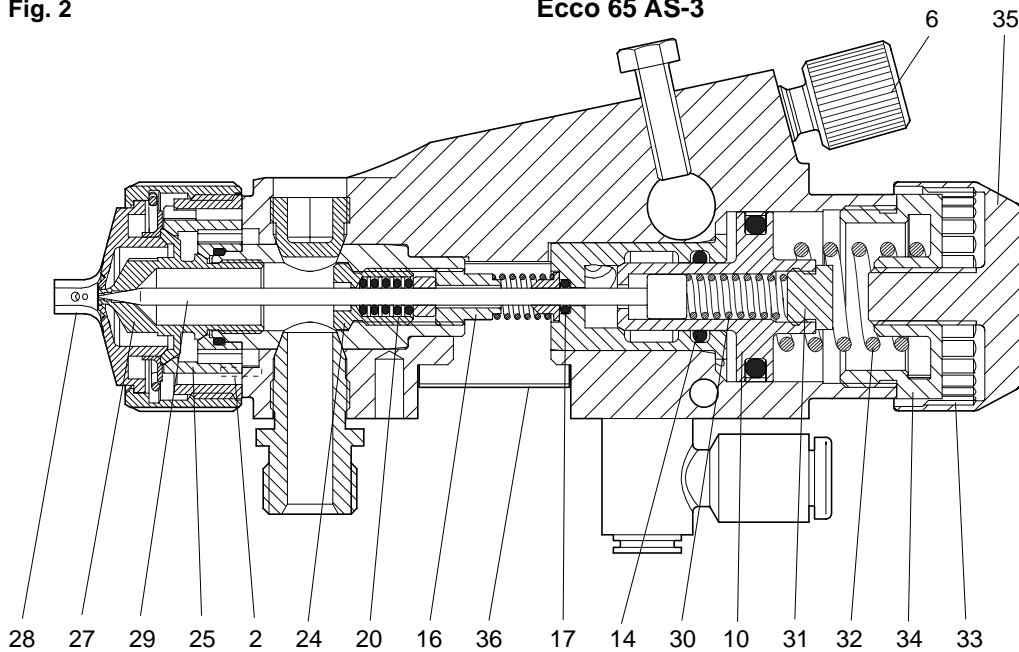
1. Unscrew the control knob (35) and spring housing (34) and remove the spring (32).
2. Hold the entire needle and piston (10) and pull it towards the back.
3. Unscrew the screw (31) from the piston (10) and remove the spring (30) and paint needle (29).
4. Remove the air cap (28), and the paint nozzle (27).
5. Remove the cover (36) and the set screw (16).
6. Remove the packing screw (24).
7. Pry out the packing set (20).
8. Clean everything well with cleaning agent and then blow out with air.
8. Fit the new packings set (20).
9. Re-fit the needle and piston assembly (10, 29, 30, 31).
10. Tightening the set screw (16) until contact is reached between the packing set.
11. Re-fit the spring (32), spring house (34) with the spring (33) and the control knob (35).
12. Re-fit the paint nozzle (27) (screwing torque 22 Nm) and the air cap (28) by hand.

Distribution ring

1. Remove the air cap (28) and the paint nozzle (27).
2. Remove the distribution ring (25) by screwing on the air cap (28) a few turns. Withdraw the distribution ring axially from the body.
3. Re-fit the distribution ring (25) by mating it with a guide pin (2) in the body.
4. Re-fit the paint nozzle (27) (with torque 22 Nm) and re-fit the air cap (28) (tighten by hand).

Fig. 2

Ecco 65 AS-3



- 2. Pin
- 6. Control knob
Fan with adjusting
- 10. Piston
- 14. O-ring
- 16. Set screw
- 17. O-ring
- 20. Packing set
- 24. Packing screw
- 25. Distribution ring
- 27. Paint nozzle
- 28. Air cap
- 29. Paint needle
- 30. Spring
- 31. Screw
- 32. Spring
- 33. Spring
- 34. Spring housing
- 35. Control knob
Paint flow adjusting
- 36. Cover

65135 F170

Troubleshooting

Introduction

Always commence troubleshooting by checking the general condition of the spray gun. This can most easily be determined by test spraying, which provides an opportunity for checking the spray pattern and capacity, air leakage and gasket leakage.

Types of problems

Collection of information which makes it possible to identify the error symptoms applicable to the spray gun in the event of malfunctioning is a matter of vital importance. Identification of symptoms makes it possible to decide whether the spray gun itself is the direct cause of the malfunctioning or if this may have been caused by an external factor.

The following external factors can cause malfunctioning and should be thoroughly checked:

1. The quality of the air, i.e. content of moisture, dirt particles and oil.
2. The quality of the paint, i.e. its viscosity, purity. etc.
3. The air and paint pressure in relation to viscosity of the paint and nozzle combination used.
4. The size of the air/paint hoses.

Troubleshooting chart



Correct Spray Pattern

Spray Pattern	Cause	Remedy
<p>Asymmetrical to the left or to the right</p>	a) Dried paint on holes for atomizing air. b) Damage to holes for atomizing air. c) Air cap not sufficiently tightened.	a) Dried paint on holes for atomizing air. Clean the air holes, use appropriate cleaning agent and a soft brush. b) Damage to holes for atomizing air. Replace the air cap with a new one. c) Air cap not sufficiently tightened. Tighten the air cap properly by hand.
<p>Distorted in the middle</p>	a) Damage to the tip of the paint nozzle. b) The pressure of the atomizing air in relation to the viscosity of the paint.	a) Fit a new paint nozzle. b) Adjust the air pressure of the atomizing air.
<p>Narrowing off in the middle</p>	a) Wrong nozzle combination. b) Fan air pressurer too high. c) Paint viscosity unsuitable. d) Incorrect spray angle.	a) Select a new nozzle combination suitable for the viscosity of paint. b) Reduce the pressure of the fan air. c) Adjust the viscosity of the paint. d) Adjust the angle with the fan width control.
<p>Irregular spray (spitting)</p>	a) Paint needle gasket leaky. b) Damaged O-ring in distributor ring. c) Paint nozzle not tightened. d) Dirt on sealing surfaces of paint nozzle and distributor ring. e) Paint hose connection not tightened. f) Paint hose defective.	a) Adjust the packing screws. If this does not suffice, change the paint needle gaskets. b) Change the O-ring in the distributor ring. c) Tighten the paint nozzle. d) Clean the sealing surfaces of the paint nozzle and distributor ring with solvent and blow clean. e) Tighten the paint hose connection. f) Change the paint hose.

Paint leaking - Air leaking	Cause	Remedy
Paint leaking	Worn needle packings and/or needle.	Replace damaged parts with new ones.
Air leaking when the piston (10) is operating.	Worn or damaged O-rings (14 and 17).	Replace damaged parts with new ones.
Paint leaking through the paint nozzle when the gun is closed.	Pollution between the needle and the nozzle or needle and nozzle worn or damaged.	Unscrew air cap (28) and nozzle (27). Clean carefully and check for any sign of damages or wear.

