

DEVILBISS

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CE  II 2 G X

Operation Manual

FLG-S5-18

Transtech Suction-feed Spray Gun



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P 2 - 8



Operation Manual FLG5 – Suction-feed Spray Gun

Important

Read and follow all instructions and Safety Precautions before using this equipment

Description

The FLG5 Suction-feed Spray gun is fitted with a 1.8mm nozzle for topcoat applications. The FLG5 Spray gun is approved to ATEX regulations 94/9/EC, protection level; **II 2 G X. Suitable for use in Zones 1 and 2**

Important: *These spray guns are suitable for use with both water-based and solvent-based coating materials. The design uses EPA compliant atomising (Devilbiss Trans-Tech®) technology to reduce overspray and improve coating efficiency. Nozzles and needles are manufactured in stainless steel. These guns are not designed for use with highly corrosive and/or abrasive materials and if used with such materials it must be expected that the need for cleaning and/or replacement of parts will be increased. If there is any doubt regarding the suitability of a specific material contact your local Distributor or ITW Finishing direct.*

Specification

Air supply connection -	Universal ¼" BSP and NPS
Maximum static air inlet pressure -	P ₁ = 12 bar (175 psi)
Nominal gun inlet pressure with gun triggered -	2.4 bar (35 psi)
Maximum service temperature -	40°C
Gun weight -	930 g
Air flow -	277 l/min (9.8 cfm)

Materials of Construction

Gun body	-	Aluminium
Nozzle	-	Stainless steel
Needle	-	Stainless steel
Cup	-	Aluminium and steel

ITW Finishing Systems and Products reserve the right to modify equipment specification without prior notice.

SAFETY WARNINGS

Fire and explosion



Solvents and coating materials can be highly flammable or combustible when sprayed. **ALWAYS refer to the coating material suppliers instructions and COSHH sheets before using this equipment.**



Users must comply with all local and national codes of practice and insurance company requirements governing ventilation, fire precautions, operation and house-keeping of working areas.



This equipment, as supplied, is NOT suitable for use with Halogenated Hydrocarbons.



Static electricity can be generated by fluid and/or air passing through hoses, by the spraying process and by cleaning non-conductive parts with cloths. To prevent ignition sources from static discharges, earth continuity must be maintained to the Spray gun and other metallic equipment used. It is essential to use conductive air and/or fluid hoses.



Personal Protective Equipment



*Toxic vapours – When sprayed, certain materials may be poisonous, create irritation or be otherwise harmful to health. Always read all labels, safety data sheets and follow any recommendations for the material before spraying. **If in doubt, contact your material supplier.***



The use of respiratory protective equipment is recommended at all times. The type of equipment must be compatible with the material being sprayed.



Always wear eye protection when spraying or cleaning the Spray gun.



Gloves must be worn when spraying or cleaning the equipment.

Training – Personnel should be given adequate training in the safe use of spraying equipment.

Misuse

Never aim a Spray gun at any part of the body.

Never exceed the max. recommended safe working pressure for the equipment.

The fitting of non-recommended or non-original spares may create hazards.

Before cleaning or maintenance, all pressure must be isolated and relieved from the equipment.

The product should be cleaned using a gun-washing machine. However, this equipment should not be left inside gun-washing machines for prolonged periods of time.

Noise Levels



The A-weighted sound level of Spray guns may exceed 85 dB (A) depending on the set-up being used. Details of actual noise levels are available on request. It is recommended that ear protection is worn at all times when spraying.

Operating

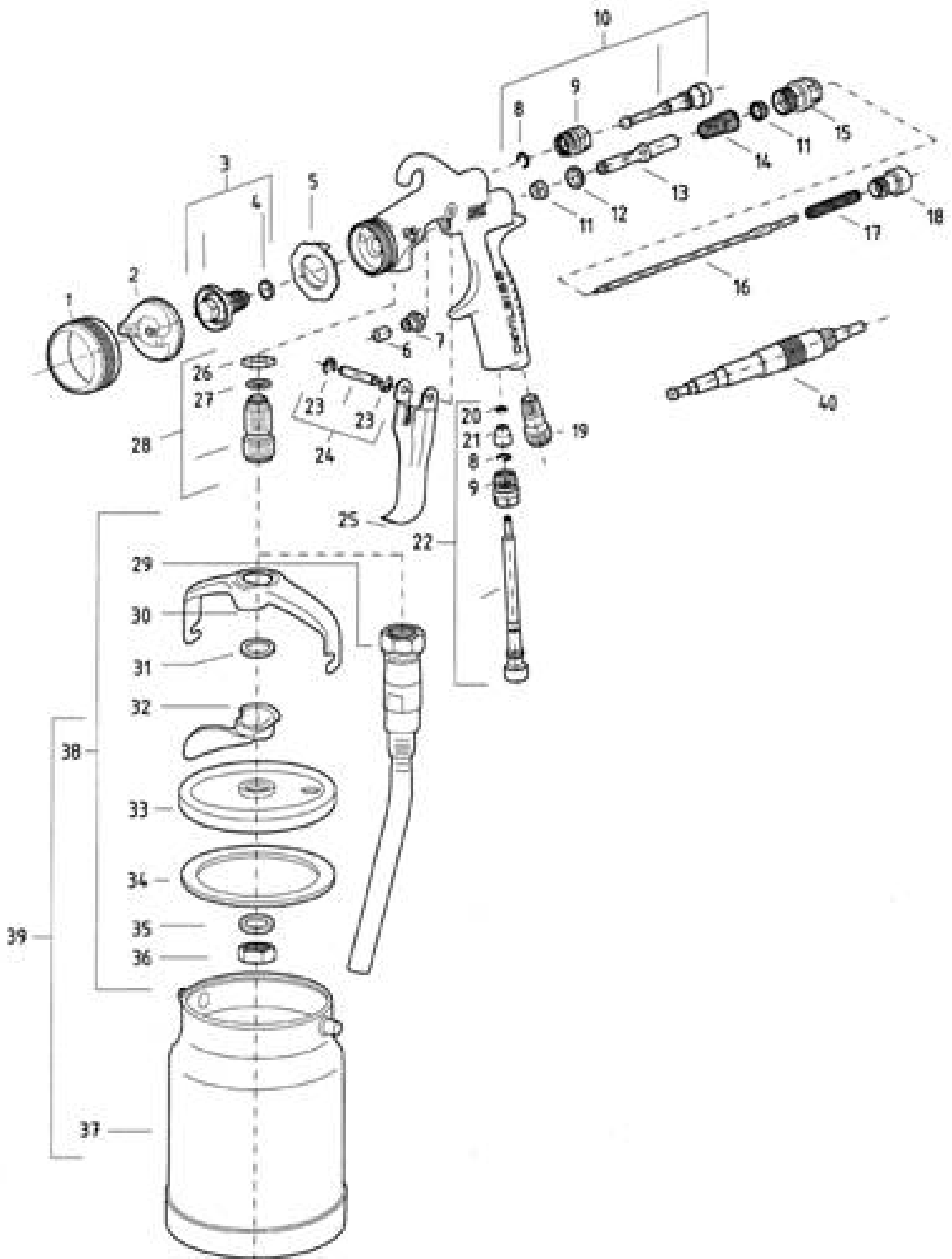
Spray equipment using high pressures may be subject to recoil forces. Under certain circumstances, such forces could result in repetitive strain injury to the operator.

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Parts List

Ref. No	Part Number	Description	
1	SGK-0023	Retaining ring	1
2	FLG-0001-5	Air cap	1
3	SGK-0014-18	Fluid tip 1.8mm	1
★● 4	-	Gasket	1
★● 5	-	Baffle	1
★ 6	-	Packing	1
7	-	Packing gland nut	1
8	-	Retaining ring	1
9	-	Spray pattern adjustment valve bushing	1
10	-	Spray pattern valve	1
★ 11	-	U-cup seal	2
★ 12	-	Air-valve seat	1
★ 13	-	Air-valve stem	1
★ 14	-	Air-valve spring	1
15	-	Air-valve bushing	1
16	SGK-0430-18	Fluid needle 1.8mm	1
17	-	Fluid needle spring	1
18	-	Fluid adjustment knob	1
19	-	Nipple	1
20	-	Retaining ring	1
21	-	Air adjusting valve head	1
22	-	Air adjusting valve assembly	1
23	-	Retaining ring	1
24	-	Trigger pin assembly	1
25	-	Trigger	1
26	-	Nut	
27	-	Washer	
28	-	Nipple assembly fluid	
29	-	Fluid tube	
30	-	Yoke	
31	-	Washer	
32	-	Cam	
33	-	Lid	
34	-	Gasket	
35	-	Washer	
36	-	Nut	
37	-	Cam	
38	-	Lid assembly	
39	-	Cup assembly	
★ 40	-	Assembly tool	

★	K-5040:	Seal, baffle and gasket replacement kit, items 4, 5, 6, 11, 12, 13, 14, and 40
●	K-5030:	Baffle replacement kit, items 4 and 5.



Installation

Important: To ensure that this equipment reaches you in first class condition, protective coatings have been used. **Flush the equipment through with a suitable solvent before use.**

1. Attach air hose to connector (18). Recommended hose size 8 mm bore. The hose must be conductive and electrical bond from the Spray gun to earth should be checked with an ohmmeter. A resistance of less than 10^6 Ohms is recommended.
2. Attach the cup lid assembly (37) to the fluid inlet connector (27).
3. Position the yoke at right angles to the gun with the cam lever (31) to the front (see picture). Make sure the vent hole in the lid is positioned under the yoke and the hole in the diaphragm (KR-115) if fitted is 180° to the lid vent hole.

Operation

1. Mix coating material to manufacturers instructions.
2. Fill the cup with the required amount of material. Fill to no more than 25mm (1") from the top of the cup. **DO NOT OVERFILL.**
3. Attach cup to the lid assembly.
4. Turn needle adjusting screw (18) clockwise to prevent movement.
5. Turn spreader valve (10) counter-clockwise to fully open.
6. Adjust inlet air pressure (For recommended figures see Specifications) at the gun inlet with the gun triggered. (*pressure gauge attachment shown under Accessories is recommended for this*).
7. Turn needle adjusting screw counter clockwise until first thread shows.
8. Test spray. If the finish is too dry reduce air flow by reducing air inlet pressure or by the air flow valve (22). Screw the adjusting knob in to reduce pressure.
9. If finish is too wet reduce fluid flow by turning needle screw (18) clockwise or reducing the fluid pressure. If atomisation is too coarse, increase inlet air pressure. If too fine reduce inlet pressure.
10. The pattern size can be reduced by turning adjusting valve (10) clockwise.
11. Hold gun perpendicular to surface being sprayed. Arcing or tilting may result in uneven coating.
12. The recommended spray distance is 150-200 mm (6"-8").
13. Spray edges first. Overlap each stroke a minimum of 50%. Move gun at a constant speed.
14. Always turn off air supply and relieve pressure when gun is not in use.

Preventative Maintenance

1. Turn off air and relieve pressure in the supply lines, or if using QD system, disconnect from airline.
2. Release cup and raise the tube out of the material. Trigger the gun and allow material to drain back into the cup. Dispose of the surplus material.
3. Clean the cup. Remove the drip-free diaphragm (if fitted) and clean. Replace the diaphragm if is split or damaged.
4. Check the breather hole in the lid is not blocked.
5. Remove air cap (2) and clean. If any of the holes in the cap are blocked with coating material only use the cleaning Kit KK-4584 (see Accessories) which has the correct tools for this or a toothpick to clean. Using any other tool could damage the cap and produce distorted spray patterns.
6. Ensure the tip of the nozzle (3) is clean and free from damage. Build-up of dried paint can distort the spray pattern.
7. Lubrication – trigger stud (24), needle (16) and air-valve spindle (13) should be oiled each day.

Replacement of Parts

Nozzle (3) and needle (16) – Remove parts in the following order: 18, 17, 16, 1, 2 and 3. Check condition of nozzle seal (4) and replace if necessary. Replace any worn or damaged parts and re-assemble in reverse order. Recommended tightening torque for nozzle (3) 16-20 Nm (150-180 lbf in).

Packing – Remove parts 18, 17, 16. Unscrew packing nut (7). Remove packing (6). Fit new packing (6) and nut (7). Re-assemble parts 16, 17, and 18 and tighten packing nut (7) with spanner sufficient to seal but to allow free movement of needle. Lubricate with gun oil.

Air-valve Seal Kit K-5040

1. Remove adjusting knob (18), spring (17), and needle (16).
2. Loosen housing (15).
3. Remove housing (15) and air-valve spring (14).
4. Remove spindle (13).
5. Using service tool (40), engage groove behind the valve seat (12) and remove valve seat.
6. Push out the front air-valve seal (11).
7. Turn the gun upside down and let the seal fall out.
8. Fit new front seal (11) to service tool.
9. Fit new seal to gun body and press firmly to ensure seal is engaged.
10. Fit new valve seat (12) to service tool and fit valve seat into gun body.
11. Remove rear air-valve seal (11) from housing (15) with a hooked instrument.
12. Fit new seal to service tool and fit seal to housing (15).
13. Replace spindle (13).
14. Replace valve spring (14), screw in housing (15) and tighten.
15. Screw reverse end of service tool into housing until fully engaged. Tighten by hand to seat the valve seat. Remove tool.
16. Fit needle (16), spring (17) and knob (18).
17. Adjust needle packing (7) with spanner sufficient to seal but to allow free movement of needle. Lubricate with gun oil.

Spreader valve (10) – Caution: always ensure that the valve is in the fully open position by turning screw fully counter-clockwise before fitting to body.

Air cap / Nozzle selection

Refer to coating material manufacturers recommendations or ITW Finishing UK Website:

www.itweuropeanfinishing.com

Accessories

Cleaning brush – order 4900-5-1-K3

Air-adjusting valve and gauge – order HAV-501

Digital pressure gauge – DGI-501-BAR

Lubricant – order GL-1-K10

Drip-free diaphragm – order KR-115-K5

Spray gun cleaning kit – KK-4584

EC Declaration of Conformity

We, **ITW Finishing UK, Ringwood Rd, Bournemouth, Dorset, BH11 9LH, UK**, as the Authorised Representative of the manufacturer of the **Spray gun model FLG5**, declare, under our sole responsibility, that the equipment to which this document relates is in conformity with the following standards or other normative documents:

BS EN 292-1 PARTS 1 & 2: 1991, BS EN 1953: 1999; and thereby conform to the protection requirements of Council Directive **98/37/EC** relating to **Machinery Safety Directive**, and;

EN 13463-1:2001, council Directive **94/9/EC** relating to **Equipment and Protective Systems intended for use in Potentially Explosive Atmospheres protection level II 2 GX**.

This product also complies with the requirements of the EPA guidelines, PG6/34.

Transfer efficiency certificates are available on request.



B. Holt, General Manager

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