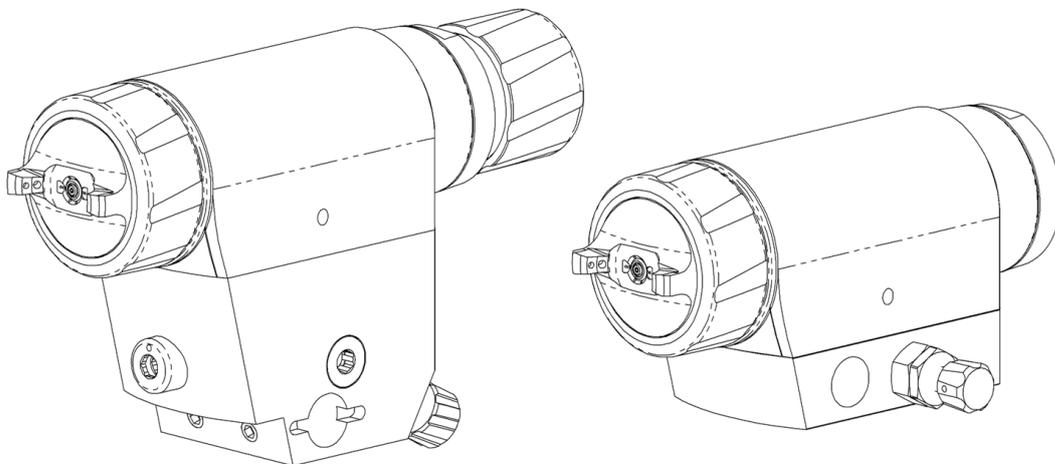


# DVXA Low Pressure, Air Atomisation Automatic Spray Gun, with Lever or Screw Type Manifold

UK  
CA CE  II 2 G X / Ex h II Gb X



**DVX**

**EAC**

## **IMPORTANT! DO NOT DESTROY**

It is the Customer's responsibility to have all operators and service personnel read and understand this manual.

Contact your local Binks representative for additional copies of this manual.

**READ ALL INSTRUCTIONS BEFORE OPERATING THIS PRODUCT.**

## FUNCTIONAL DESCRIPTION

The DVXP low pressure air atomising spray guns are designed to be fast changeover, modular construction applicators, for spray finishing on machines and fixed mountings.

They can be mounted on either a rear entry, lever operated, fast detachable manifold, or a screw attached, low profile manifold, dependant on the part number selected and mounting preference. They are intended for most types of general industrial coating and fine finishing operations, suitable for both water based and solvent based applications. The guns are designed as a flexible solution for the modern coating applicators, with multiple accessories available, to further optimise the process.

## SPECIFICATIONS

### FLUID AND AIR INLET PRESSURES

|                              |                              |
|------------------------------|------------------------------|
| P1= Max Air Input Pressure   | 7 Bar [102 psi]              |
| P2= Max Fluid Input Pressure | 7 Bar [102 psi]              |
| P3= Cylinder Air Pressure    | 4 - 7 Bar [58 psi - 102 psi] |

### ENVIRONMENTAL

|                                       |                      |
|---------------------------------------|----------------------|
| P1= Max Ambient Operating Temperature | 40°C Nominal [104°F] |
|---------------------------------------|----------------------|

### MATERIALS OF CONSTRUCTION

|                                   |   |
|-----------------------------------|---|
| Gun Head and Fluid Passageways    | Stainless Steel                                   |
| Gun Body Material                 | Quickclean™ Coated Aluminium                      |
| Air Cap Material                  | Electroless Nickel Plated Brass                   |
| Fluid Tip and Needle Construction | Stainless Steel<br>Nitride Coated Stainless Steel |
| Seals and O-Rings                 | HDPE, Viton Extreme, PTFE                         |

| MANIFOLD THREAD        | LEVER TYPE     | SCREW TYPE |
|------------------------|----------------|------------|
| P1= Air Inlet          | 1/8" NPSM      | 1/4" NPSM  |
| P1= Fluid Inlet        | 1/4" BSP/NPSM* | 1/4" NPSM  |
| P1= Cylinder Air Inlet | 1/8" NPSM      | 1/8" NPSM  |

\* Dependant upon Region and gun model chosen. See Table 5 for additional information.

| WEIGHT WITH MANIFOLD | LEVER TYPE | SCREW TYPE |
|----------------------|------------|------------|
| WEIGHT               | 940g       | 850g       |

| DIMENSIONS WITH MANIFOLD | LEVER TYPE    | SCREW TYPE    |
|--------------------------|---------------|---------------|
| L x H x W mm             | 127 x 97 x 44 | 127 x 64 x 89 |

|  |  |
|--|--|
| <b>Product Description / Object of Declaration:</b>  | <b>DVXA</b>  |
| <b>This Product is designed for use with:</b>  | <b>Solvent &amp; Waterbased Materials</b>  |
| <b>Suitable for use in hazardous area:</b>   | <b>Zone 1/Zone 2</b>   |
| <b>Protection Level:</b>   | <b>II 2 G X/Ex h II Gb X</b>   |
| <b>Notified body details and role:</b>   | <b>Element Materials Technology Rotterdam B.V. (2812)</b><br><br><b>Lodging of ATEX Technical file</b> |
| <b>This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:</b> | <b>Binks U.K. Limited,<br/>Ringwood Road,<br/>Bournemouth, BH11 9LH. UK</b>                            |
| <b>Representative authorised to compile the technical file</b>   | <b>President @. Binks France SAS<br/>5 Place Pierre Semard, 94130 Nogent sur Marne , Paris, France</b> |

## EU Declaration of Conformity



**This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:**

Machinery Directive 2006/42/EC

ATEX Directive 2014/34/EU

by complying with the following statutory documents and harmonised standards:

EN ISO 12100:2010 Safety of Machinery - General Principles for Design

BS EN 1953:2013 Atomizing and spraying equipment for coating materials - Safety requirements

EN ISO 80079-36:2016 Explosive Atmospheres- Part 36:Non Electrical equipment for explosive atmospheres-Basic methods and requirements.

EN ISO 80079-37:2016 Explosive Atmospheres- Part 37: Non Electrical equipment for explosive atmospheres - protection by methods "c", "b" and "k".

EN 1127-1:2019 Explosive atmospheres - Explosion prevention - Basic concepts

HVLP and High Efficiency products comply with the requirements of PG6 from the EPA guidelines and offer greater than 65% transfer efficiency.

High volume, low pressure (HVLP) sprayguns are designed to reduce overspray and provide maximum transfer efficiency by limiting air cap pressure to 0.69 bar (10 psi) (complies with rules issued by SCAQMD and other authorities).

Providing all conditions of safe use / installation stated within the product manuals have been complied with and also installed in accordance with any applicable local codes of practice.

Signed for and on behalf of Binks  
U.K. Ltd:

**F. A. Sutter** Executive President: Engineering and  
Operations, Shoreview, MN, 55126. USA

Document Part No.

. EN

15-04-25

|  |   |
|--|---|
| <b>Product Description / Object of Declaration:</b>  | <b>DVXA</b>   |
| <b>This Product is designed for use with:</b>  | <b>Solvent &amp; Waterbased Materials</b>                                   |
| <b>Suitable for use in hazardous area:</b>   | <b>Zone 1/Zone 2</b>  |
| <b>Protection Level:</b>   | <b>II 2 G X/Ex h II Gb X</b>  |
| <b>Approved body details and role:</b>   | <b>Element Materials Technology Warwick Ltd. UK. (0891)</b>                 |
|  | <b>Lodging of UKEX Technical file</b>                                       |
| <b>This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:</b> | <b>Binks U.K. Limited,<br/>Ringwood Road,<br/>Bournemouth, BH11 9LH. UK</b> |

## UKCA Declaration of Conformity

**UK  
CA**



**This Declaration of Conformity / Incorporation is issued under the sole responsibility of the manufacturer:**

Supply of Machinery (Safety) Regulations 2008

Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016

by complying with the following statutory documents and designated standards:

BS EN ISO 12100:2010 Safety of Machinery - General Principles for Design

BS EN 1953:2013 Atomizing and spraying equipment for coating materials - Safety requirements

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In this part sheet, the words WARNING, CAUTION and NOTE are used to emphasise important safety information as follows:

**EN**

| ! <b>WARNING</b>  | ! <b>CAUTION</b>   | <b>NOTE</b>   |
|---|--|---|
| Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage. | Hazards or unsafe practices which could result in minor personal injury, product or property damage. | Important installation, operation or maintenance information. |

**! WARNING**

Read the following warnings before using this equipment.



**SOLVENTS AND COATING MATERIALS.** Can be highly flammable or combustible when sprayed. Always refer to the coating material supplier's instructions and safety sheets before using this equipment.



**INSPECT THE EQUIPMENT DAILY.** Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.



**READ THE MANUAL.** Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual. 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.



**EQUIPMENT MISUSE HAZARD.** Equipment misuse can cause the equipment to rupture, malfunction or start unexpectedly and result in serious injury.



**FIRE AND EXPLOSION HAZARD.** Never use 1,1,1-Trichloroethane, Methylene Chloride, other Halogenated Hydrocarbon solvents or fluids containing such solvents in equipment with aluminium wetted parts. Such use could result in a serious chemical reaction, with the possibility of explosion. Consult your fluid suppliers to ensure that the fluids being used are compatible with aluminium parts.



**GLOVES.** Must be worn when spraying or cleaning the equipment.



**WEAR SAFETY GLASSES.** Failure to wear safety glasses with side shields could result in serious eye injury or blindness.



**STATIC CHARGE.** Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.



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



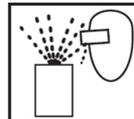
**TOXIC VAPOURS.** When sprayed, certain materials may be poisonous, create irritation, or are otherwise harmful to health. Always read all labels, safety sheets and follow any recommendations for the material before spraying. If in doubt contact your material supplier.



**NEVER MODIFY THE EQUIPMENT.** Do not modify the equipment unless the manufacturer provides written approval.



**LOCK OUT / TAG-OUT.** Failure to de-energise, disconnect, lock out and tag-out all power sources before performing equipment maintenance could cause serious injury or death.



**PROJECTILE HAZARD.** You may be injured by venting liquids or gases that are released under pressure, or flying debris.



**NOISE LEVELS.** The A-weighted sound level of pumping and spray equipment may exceed 85 dB(A) depending on equipment settings. Actual noise levels are available on request. It is recommended that ear protection is worn at all times while equipment is in use.



**PRESSURE RELIEF PROCEDURE.** Always follow the pressure relief procedure in the equipment instruction manual.



**KNOW WHERE AND HOW TO SHUT OFF THE EQUIPMENT IN CASE OF AN EMERGENCY.**



**HIGH PRESSURE CONSIDERATION.** High pressure can cause serious injury. Relieve all pressure before servicing. Spray from the gun, hose leaks or ruptured components can inject fluid into your body and cause extremely serious injury.



**OPERATOR TRAINING.** All personnel must be trained before operating finishing equipment.

**IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PROVIDE THIS INFORMATION TO THE OPERATOR OF THE EQUIPMENT.**

**DVXA GUN PART NUMBER FORMAT & PART SELECTION GUIDE**

AIR CAP

**Air Cap Type**

See table 1

FLUID TIP

**Size & construction**

See table 2

**DVXA - P1 - 08 - BSP - R**

MANIFOLD TYPE

|            |  |
|------------|--|
| <b>BSP</b> | <b>Standard - BSP Hose Connections</b> |
| <b>NPS</b> | <b>Standard - NPS Hose Connections</b> |
| <b>S</b>   | <b>Screw - Universal Connections</b>   |

BACK END OPTIONS

|          |                |
|----------|----------------|
| <b>R</b> | <b>Ratchet</b> |
| <b>F</b> | <b>Fixed</b>   |

## DVXA - PART SELECTION GUIDE

### TABLE 1 - AIR CAP PERFORMANCE GUIDE

| Part No.      | Air Cap & Type |           | ***Recommended Air Inlet Pressure | Air Consumption       | **Typical Fan Pattern Size |
|---------------|----------------|-----------|-----------------------------------|-----------------------|----------------------------|
| DVXP-130-P1-K | P1             | HVLP PLUS | 2.0 bar [29 psi]                  | 250 L/min [8.8 scfm]  | 330 mm [13 in]             |
| DVXP-130-P2-K | P2             | HVLP PLUS | 2.0 bar [29 psi]                  | 315 L/min [11.1 scfm] | 350 mm [13.75 in]          |
| DVXP-130-P3-K | P3             | HVLP PLUS | 2.0 bar [29 psi]                  | 325 L/min [11.4 scfm] | 380 mm [15 in]             |

\*\* Typical Fan Pattern Size

\*\*\* Fan pattern size @ 200mm [8"] distance.

### TABLE 2 - AIR CAP - FLUID NOZZLE/NEEDLE COMBINATIONS

| Air Cap |    |    | Fluid Nozzle   |                   |           | Needle                                      |   |
|---------|----|----|----------------|-------------------|-----------|---|---|
| P1      | P2 | P3 | Part No.       | Fluid Nozzle Size | Marking   | Part No.                                    | Marking                                 |
| ✓       | -  | -  | DVXP-230-08-K  | 0.8               | DVXP-0.8  | DVXA-340-08-10-12-K<br>DVXA-340P-08-10-12-K | DVXA-340-08-10-12<br>DVXA-340P-08-10-12 |
| ✓       | ✓  | -  | DVXP-230-10-K  | 1.0               | DVXP-1.0  |   |   |
| -       | ✓  | -  | DVXP-230-12-K  | 1.2               | DVXP-1.2  |   |   |
| -       | ✓  | -  | DVXP-230-14-K  | 1.4               | DVXP-1.4  | DVXA-340-14-16-17-K<br>DVXA-340P-14-16-17-K | DVXA-340-14-16-17<br>DVXA-340P-14-16-17 |
| -       | ✓  | -  | DVXP-230-16-K  | 1.6               | DVXP-1.6  |   |   |
| -       | -  | ✓  | DVXP-231-17-K  | 1.7               | DVXP-1.7  | DVXA-340-18-20-K<br>DVXA-340P-18-20-K       | DVXA-340-18-20<br>DVXA-340P-18-20       |
| -       | -  | ✓  | DVXP-231-18-K  | 1.8               | DVXP-1.8  |   |   |
| -       | -  | ✓  | DVXP-231-20-K  | 2.0               | DVXP-2.0  |   |   |
| ✓       | -  | -  | DVXP-230N-08-K | 0.8N              | DVXP-0.8N | DVXA-340N-08-10-12-K                        | DVXA-340N-08-10-12                      |
| ✓       | ✓  | -  | DVXP-230N-10-K | 1.0N              | DVXP-1.0N |   |   |
| -       | ✓  | -  | DVXP-230N-12-K | 1.2N              | DVXP-1.2N |   |   |
| -       | ✓  | -  | DVXP-230N-14-K | 1.4N              | DVXP-1.4N | DVXA-340N-14-16-17-K                        | DVXA-340N-14-16-17                      |
| -       | ✓  | -  | DVXP-230N-16-K | 1.6N              | DVXP-1.6N |   |   |
| -       | -  | ✓  | DVXP-231N-17-K | 1.7N              | DVXP-1.7N | DVXA-340N-18-20-K                           | DVXA-340N-18-20                         |
| -       | -  | ✓  | DVXP-231N-18-K | 1.8N              | DVXP-1.8N |   |   |
| -       | -  | ✓  | DVXP-231N-20-K | 2.0N              | DVXP-2.0N |   |   |

N = Nitride Coated

DVXA-340P-##-## Plastic Tipped Needle

**CAUTION**

**IMPORTANT:** This spraygun is suitable for use with both waterbased and solvent based coating materials.

- The gun is not designed for use with highly corrosive and/or abrasive materials including those containing Halogenated Hydrocarbons
- Immersion of parts in aggressive cleaning solutions can cause colour fading and/or component degradation. Always wash in neutral cleaning solution (pH 6 to 8). Do not submerge the gun in cleaning liquid
- The gun and its components are not designed to be cleaned using an ultrasonic bath.

If there is any doubt regarding the suitability of a specific material, contact your Binks Distributor or Binks direct.

**TYPICAL SETTING**

1. The gun mounted ATOM air valve controls the atomising air pressure. The gun mounted FAN valve controls the spray pattern size. To increase the pressure, turn anti-clockwise and to reduce the pressure turn clockwise.
2. Fluid flow can be adjusted with the gun mounted needle adjustment knob, fluid flow is increased when you turn the knob anti-clockwise.

**TYPICAL START-UP SEQUENCE**

1. Make sure all hose connections for fluid and air are securely attached to the gun
2. Check that the fluid nozzle is secure and tight in the gun head
3. Check that the air cap is correctly orientated over the Index Baffle pin and tighten it down into position.
4. Check gun Cylinder/trigger pressure is >4 bar [58 psi]
5. Reduce fluid flow from the nozzle to zero using the supply pressure or fluid needle adjustment knob on the gun.
6. Set the FAN and ATOM air flow to a nominal start pressure using regulators or the gun mounted valves
7. Adjust gun position and angle to point it in the correct direction and at the correct distance.
8. Trigger spray the gun in short bursts to reduce waste. Use the control valves or supply regulators to adjust the atomisation, pattern size and fluid flow to coat the component.

9. If the finish is too dry or thin, reduce the air flow by decreasing the air inlet regulator pressure or by screwing the valves in clockwise. Alternatively increase the fluid flow using the fluid supply pressure.
10. If the finish is too wet or heavy, increase the air flow by increasing the air inlet regulator pressure or by screwing the valves out anti-clockwise. Alternatively reduce the fluid flow using the fluid supply pressure.
11. Always aim to use air and fluid supply pressures to achieve the flows needed. Use the gun mounted control valves only for fine tuning
12. A reduction in the spray fan may require a reduction in fluid flow.
13. Always try to keep the spray gun perpendicular to the target surface, although this may be difficult with some component shapes.
14. The recommended spray distance is normally 150-200mm [6-8"]
15. Always turn off air and fluid supply, relieve pressure and clean down when gun is not in use.

### **SPRAY GUN CLEANING**

To clean air cap and fluid tip, brush exterior with a stiff bristle brush. If necessary to clean cap holes, use a broom straw or toothpick if possible. If a wire or hard instrument is used, extreme care must be taken to prevent scratching or burring of the holes which will cause a distorted spray pattern.

To clean the spray gun exterior brush and wipe depending upon the complexity of the area. It is recommended that the gun be partially disassembled to aid easy access of surfaces.

To clean fluid passages, flush with a suitable cleaning liquid. Use of an air/liquid scrubbing system is recommended for rapid and effective cleaning. Partial disassembly will aid easy access to critical areas.

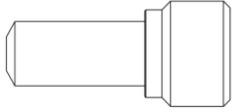
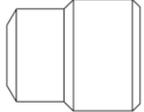
Completely dry inside and out before storage. Check that gun remains lubricated in its critical areas.

Use solvent or cleaning liquid compatible with and designed for the coating sprayed. This will increase ease of cleaning and decrease the time needed.

Never completely immerse in any solvent or cleaning solutions as this is detrimental to the lubricants and life of the spray gun.

## FLUID RECIRCULATION ACCESSORIES

### TABLE 4 - DVXA

| Part No. | Description                            |   |
|----------|--|---|
| DVXK-429 | Long Fluid Recirculation Plug (Silver) |  |
| DVXK-430 | Short Recirculation Plug (Black)       |  |
| DVXK-444 | Fluid Recirculation Bung               |  |
|          | Fluid Recirculation Plug               |  |

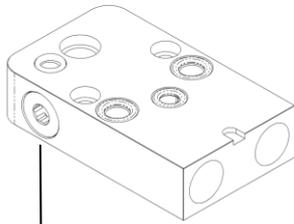
## FLUID INLET SIZES

### TABLE 5 - FLUID INLET THREAD TYPE

| Part No.         | Description                     | Manifold Thread Type   |
|------------------|---------------------------------|------------------------|
| DVXA-XX-XX-BSP-X | DVXA Gun with Standard Manifold | 1/4" BSP               |
| DVXA-XX-XX-NPS-X |                                 | 1/4" NPS               |
| DVXA-XX-XX-S-X   | DVXA Gun with Screw Manifold    | 1/4" BSP/NPS Universal |

### STANDARD MANIFOLD FLUID PLUG OPTIONS

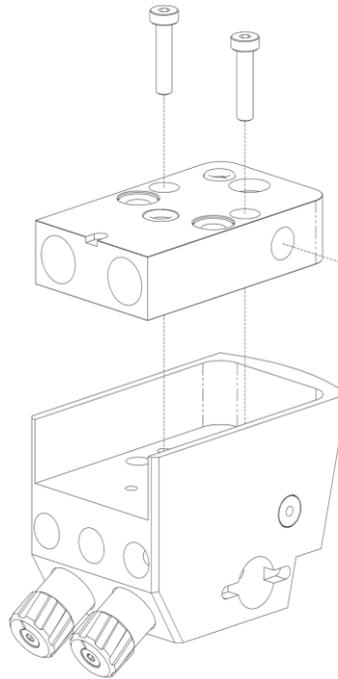
2.5mm A/F Hex  
2.5 Nm  
[22 in-lbs]



**NOTE**

DO NOT REMOVE PLUG

Any malfunctions resulting from the removal of this part will not be covered by the Warranty.

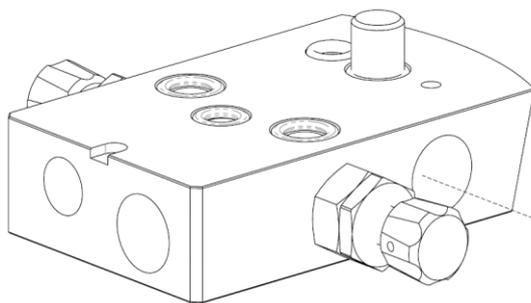


DVXK-430 - Fluid Recirculation

5mm A/F Hex  
11 Nm  
[97 in-lbs]

DVXK-429 - Fluid Non-Recirculation

### LOW PROFILE MANIFOLD FLUID PLUG OPTIONS



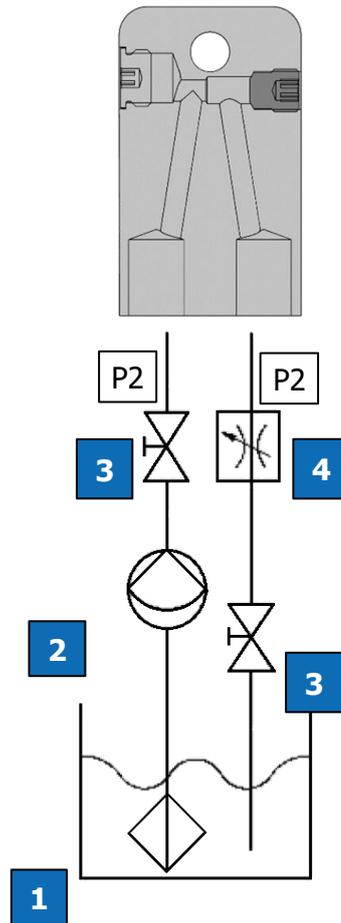
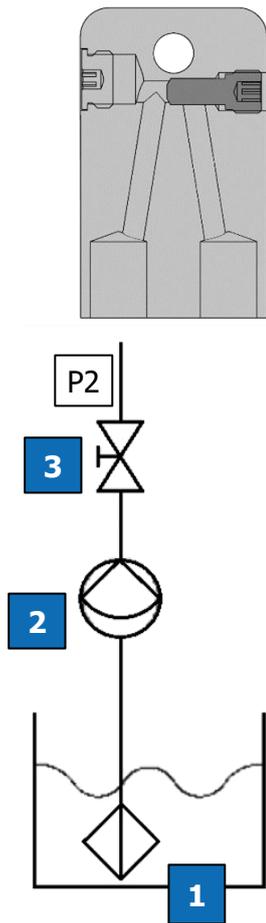
5mm A/F Hex  
30 Nm  
[266 in-lbs]

DVXK-444 - Fluid Non-Recirculation

**TYPICAL FLUID CONNECTION SCHEMATIC - STANDARD MANIFOLD**

DVXK-429 - No Fluid Recirculation

DVXK-430 - Fluid Recirculation Through Base



|    |                        |
|----|------------------------|
| 1  | Fluid filter           |
| 2  | Fluid supply           |
| 3  | Shut-off valve         |
| 4  | Fluid restrictor valve |
| 5  | Fluid reservoir        |
| P2 | Fluid - 1/4"           |

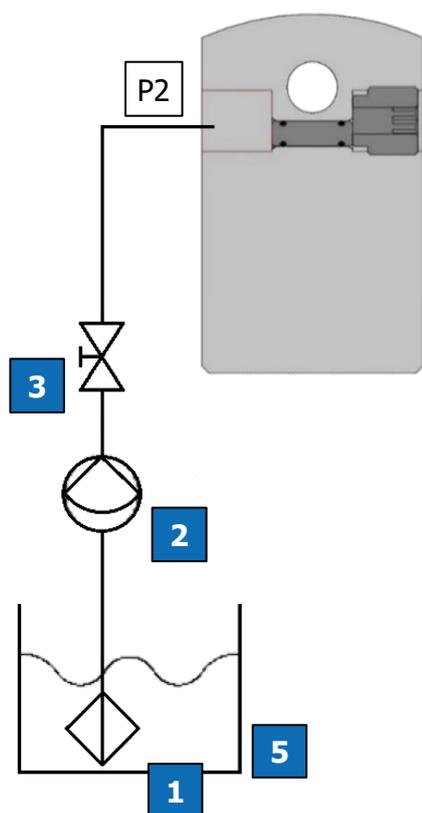


**WARNING**

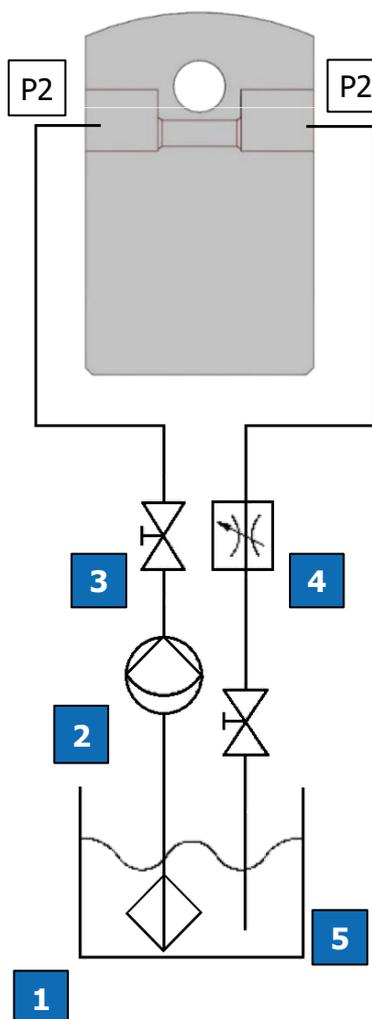
The spray gun must be earthed to dissipate any electrostatic charges which may be created by fluid or air flows. This can be achieved through the spray gun mounting, or conductive air/fluid hoses. Electrical bond from the spray gun to earth should be checked and a resistance of less than 10<sup>6</sup> Ohms is required.

## TYPICAL FLUID CONNECTION SCHEMATIC - LOW PROFILE MANIFOLD

DVXK-444 - No Fluid Recirculation



Fluid Recirculation Through Base



|    |                        |
|----|------------------------|
| 1  | Fluid filter           |
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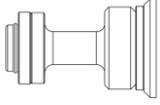
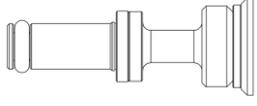
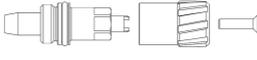
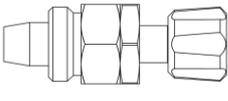
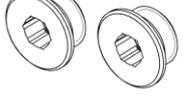
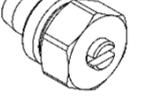
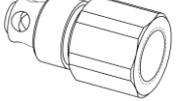
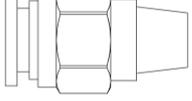
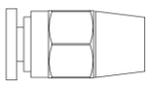


### WARNING

The spray gun must be earthed to dissipate any electrostatic charges which may be created by fluid or air flows. This can be achieved through the spray gun mounting, or conductive air/fluid hoses. Electrical bond from the spray gun to earth should be checked and a resistance of less than  $10^6$  Ohms is required.

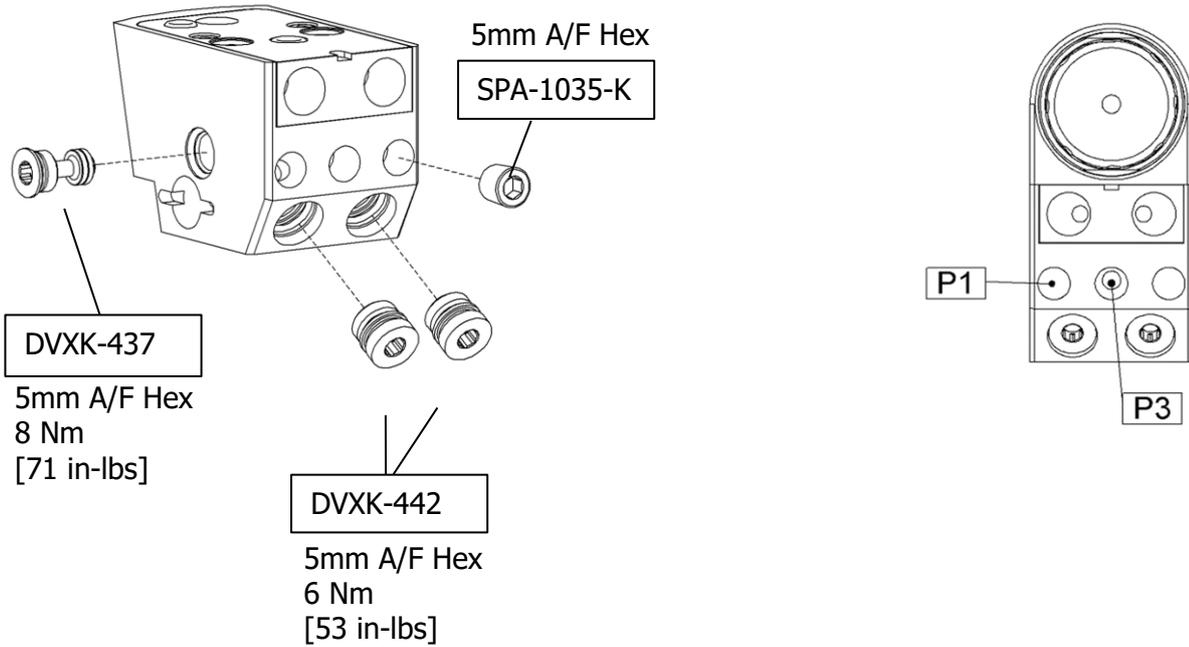
## AIR CONTROL ACCESSORIES

TABLE 6

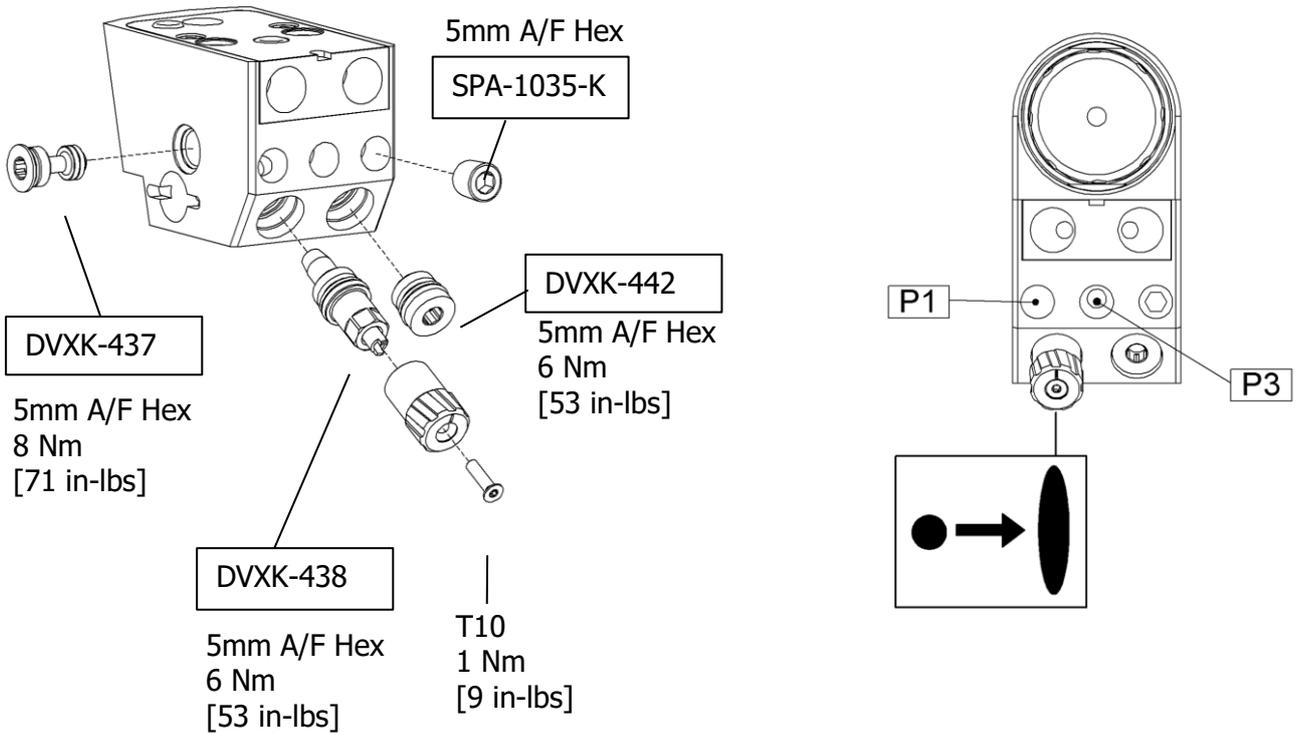
| Part No.   | Description                  |   |
|------------|------------------------------|---|
| DVXK-437   | Short Air Feed Plug (Silver) |    |
| DVXK-436   | Long Air Feed Plug (Black)   |    |
| DVXK-442   | Air Control Plug             |    |
| DVXK-438   | Air Control Valve            |    |
| DVXK-1035  | 1/8" Plug                    |    |
| SPA-414-K  | Air Control Valve            |   |
| SPA-111-K2 | Air Control Plug             |  |
| SPA-423-K  | Low Profile Control Valve    |  |
| DVXK-449   | Remote Feed Adaptor          |  |
| DVXK-1037  | 8mm Air Fitting              |  |
| DVXK-1038  | 4mm Air Fitting              |  |

**AIR FEED PORT CONFIGURATIONS - STANDARD MANIFOLD**

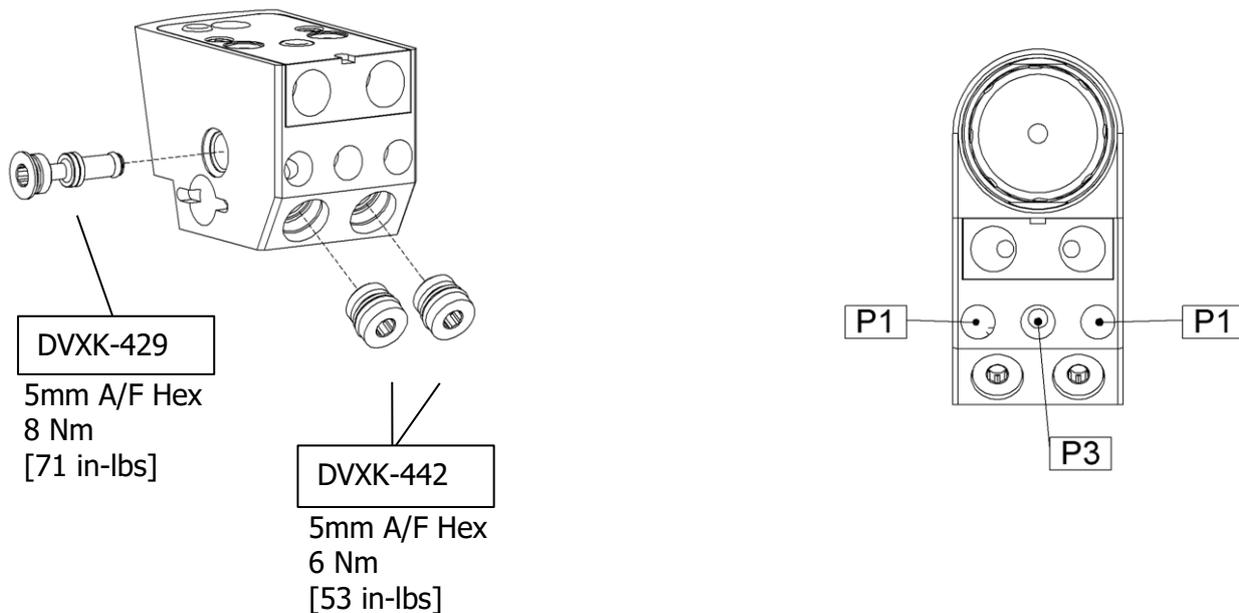
**OPTION 1. SINGLE AIR SUPPLY - NO FAN OR ATOM CONTROL VALVES ON GUN**



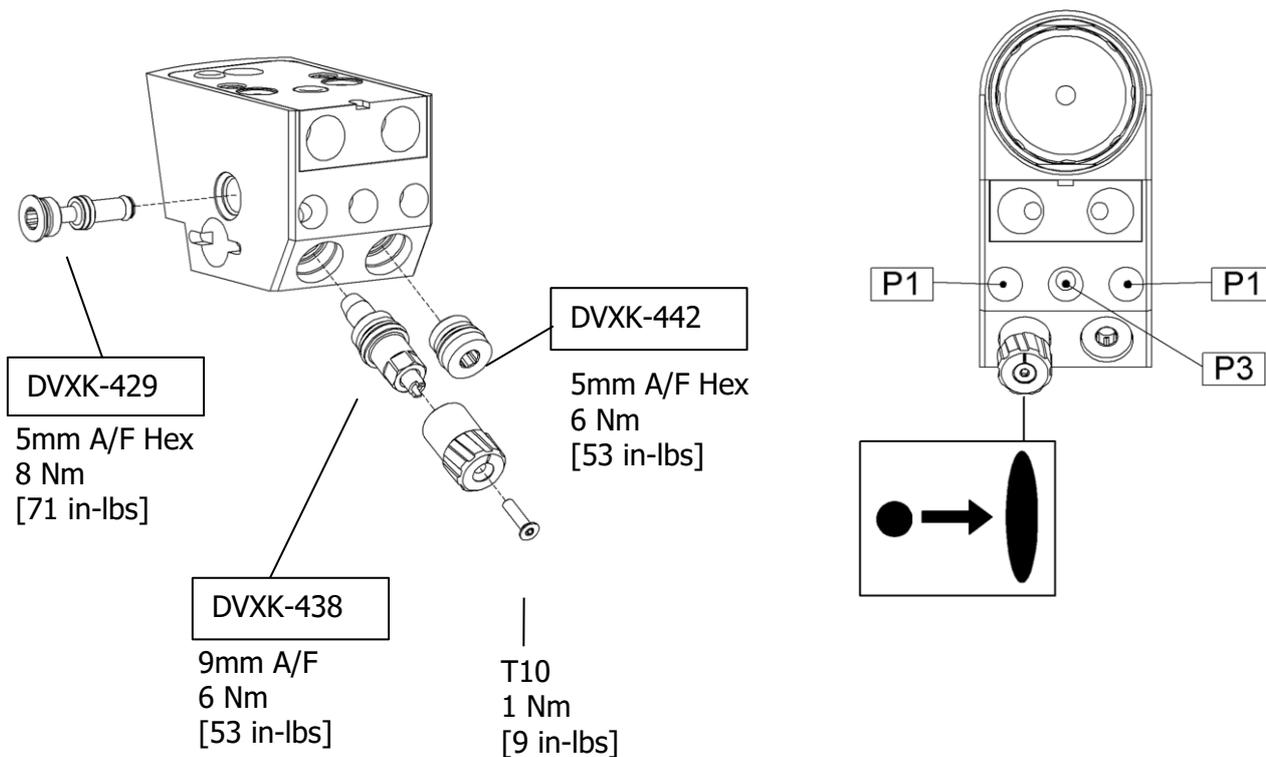
**OPTION 2. SINGLE AIR SUPPLY - FAN CONTROL VALVE ON GUN**



**AIR FEED PORT CONFIGURATIONS - STANDARD MANIFOLD**

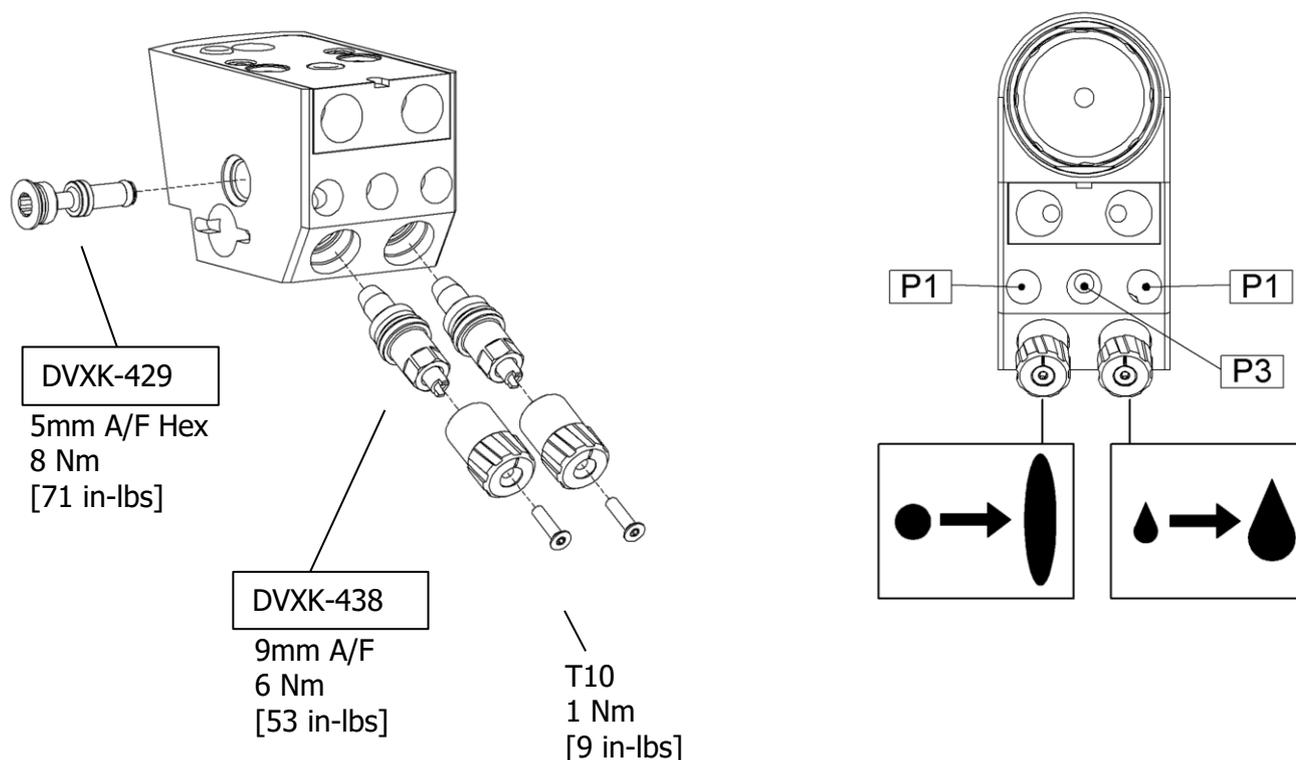


**OPTION 4. SEPARATE AIR SUPPLIES - FAN CONTROL VALVE ON MANIFOLD**



**AIR FEED PORT CONFIGURATIONS - STANDARD MANIFOLD**

**OPTION 5. SEPARATE AIR SUPPLIES - FAN & ATOM CONTROL VALVES ON MANIFOLD**



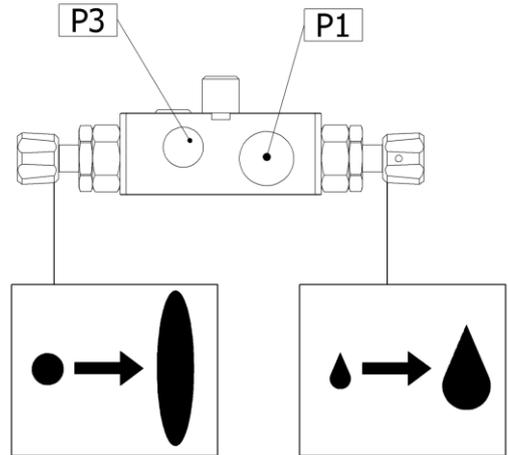
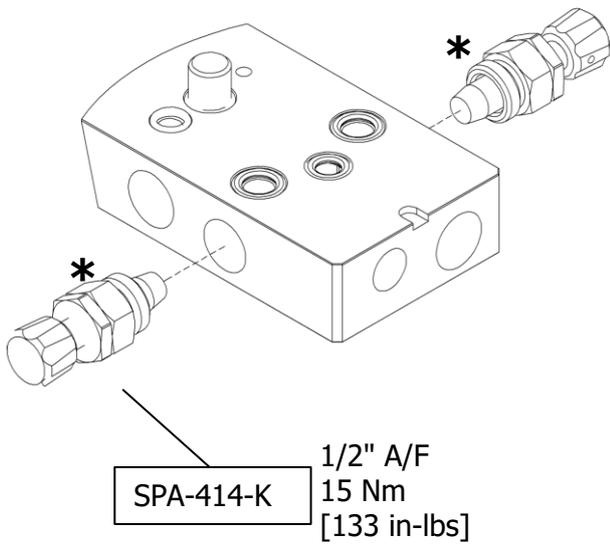
**TABLE 7 - AIR INLET CONNECTION**

| Part No.         | Description                     | Manifold Thread Type     | * Push-Fit Hose Connector                  |
|------------------|---------------------------------|--------------------------|--|
| DVXA-XX-XX-BSP-X | DVXA Gun with Standard Manifold | 1/8" Universal BSP & NPS | 8mm Hose ATOM & FAN<br>4mm Push - Hose CYL |
| DVXA-XX-XX-NPS-X | DVXA Gun with Standard Manifold | 1/8" Universal BSP & NPS | 8mm Hose ATOM & FAN<br>4mm Push - Hose CYL |
| DVXA-XX-XX-S-X   | DVXA Gun with Screw Manifold    | 1/8" Universal BSP & NPS | Not Supplied                               |

\* Contained in Gun Kit

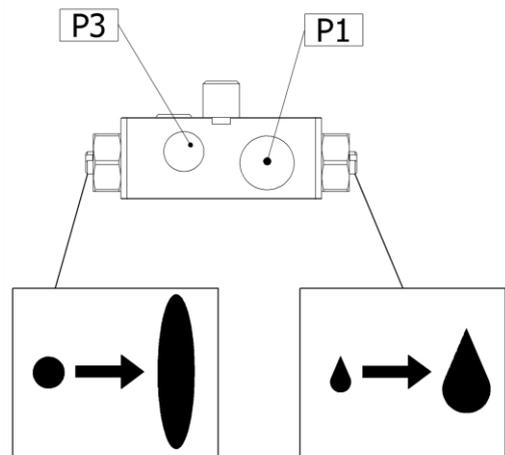
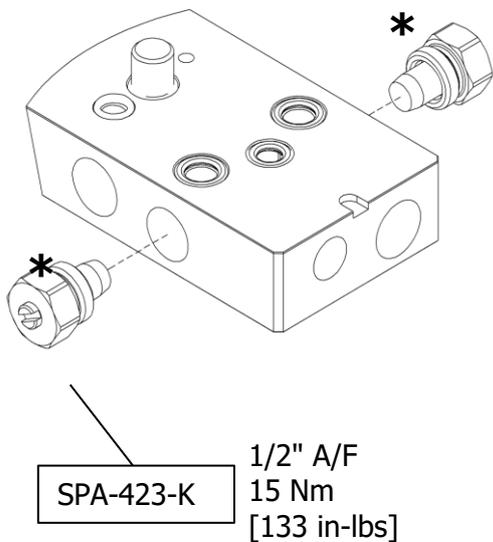
**AIR FEED PORT CONFIGURATIONS - LOW PROFILE MANIFOLD**

**OPTION 1. SINGLE AIR SUPPLY - FAN & ATOM CONTROL VALVES ON MANIFOLD**



\* Apply thread sealant to external threads.

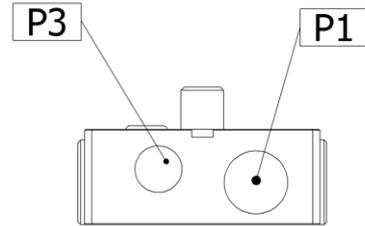
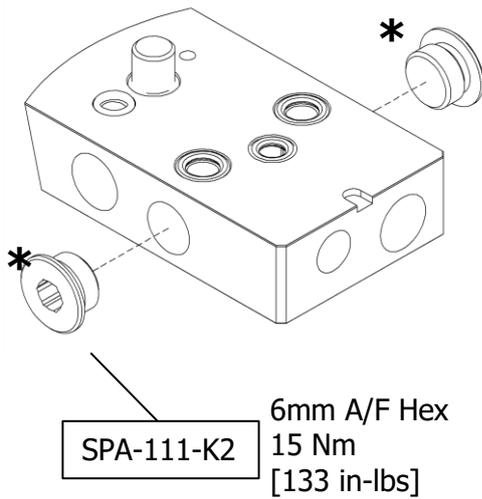
**OPTION 2. SINGLE AIR SUPPLY - LOW PROFILE FAN & ATOM CONTROL VALVES ON MANIFOLD**



\* Apply thread sealant to external threads.

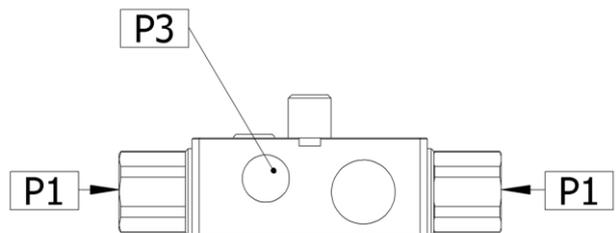
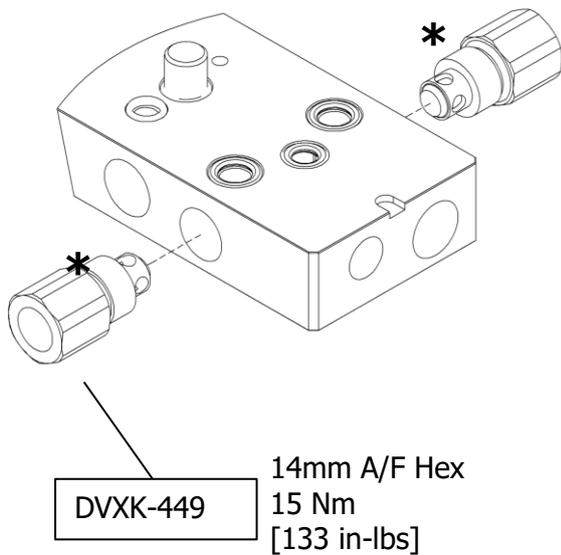
**AIR FEED PORT CONFIGURATIONS - LOW PROFILE MANIFOLD**

**OPTION 3. SINGLE AIR SUPPLY - NO FAN OR ATOM CONTROL VALVES ON MANIFOLD**



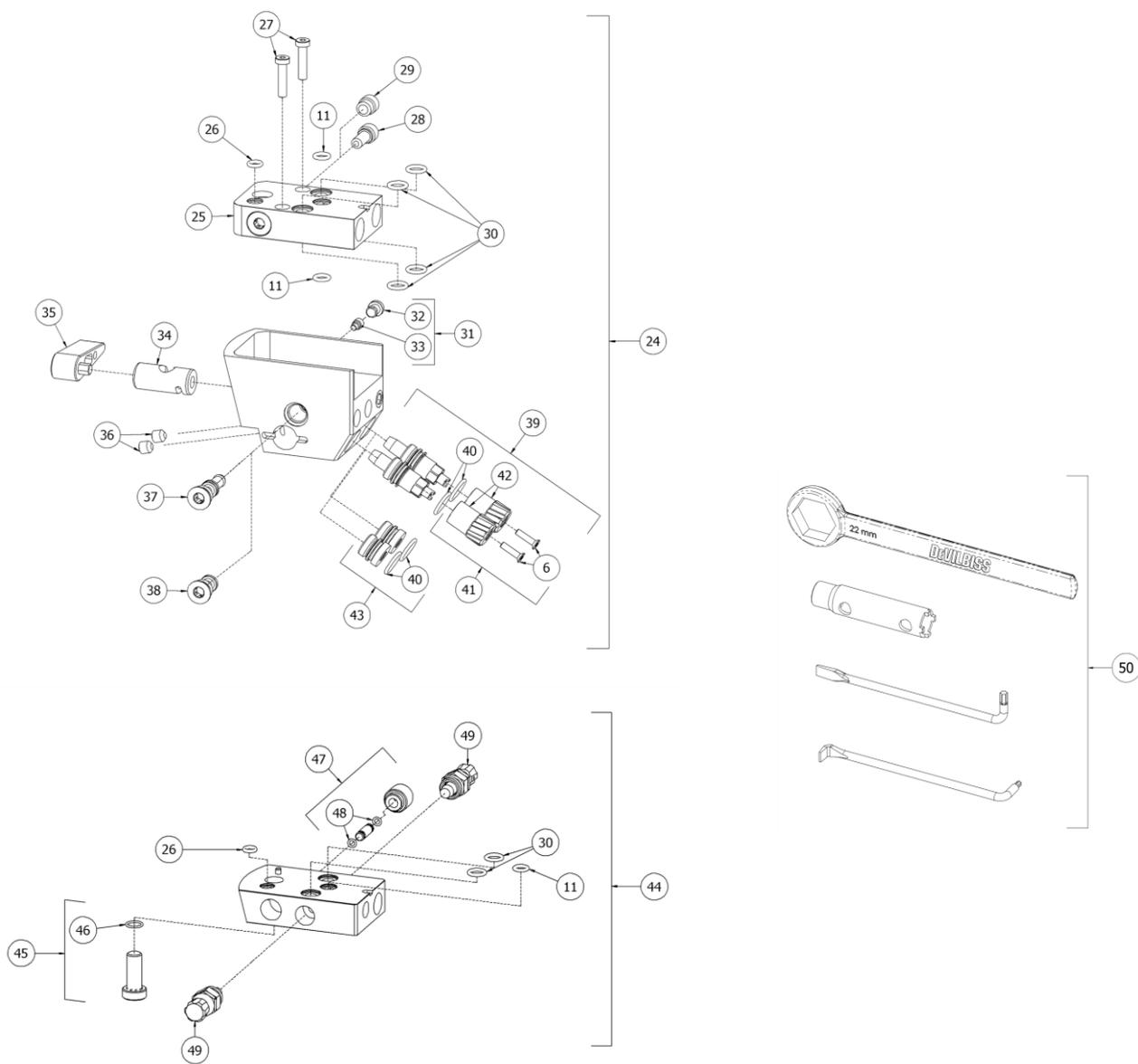
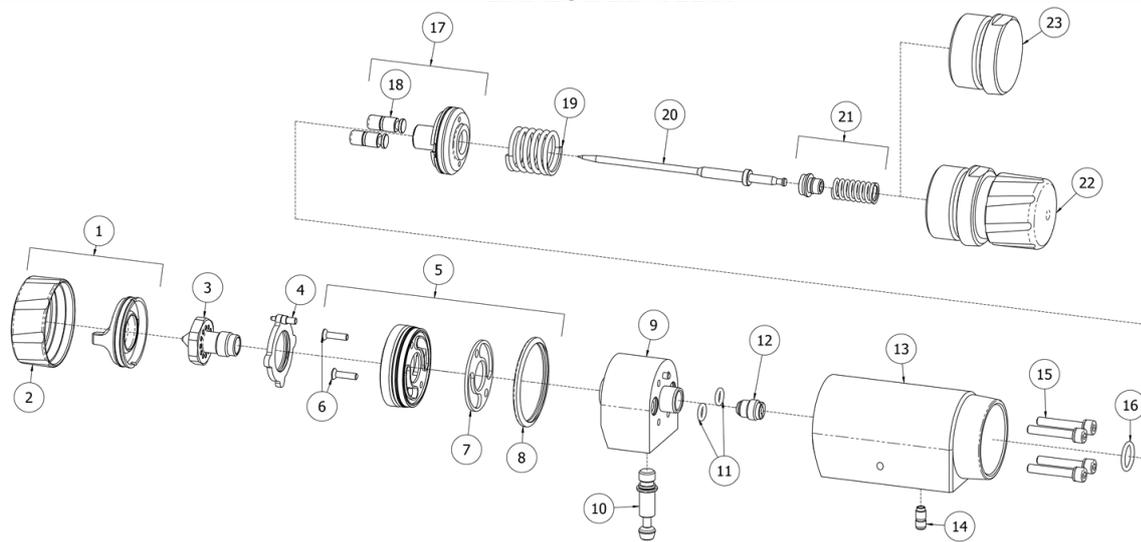
\* Apply thread sealant to external threads.

**OPTION 4. SINGLE AIR SUPPLY - REMOTE FAN AND ATOM AIR CONTROL**



\* Apply thread sealant to external threads.

EXPLODED VIEW



## PARTS LIST

| REF.     | PART No.     | DESCRIPTION                    | CAM SCREW COVER |
|----------|--------------|--------------------------------|-----------------|
| 1        | SEE TABLE 1  | AIR CAP & RETAINING RING       | 1               |
| 2        | DVXK-400     | RETAINING RING SUB ASSEMBLY    | 1               |
| 3        | SEE TABLE 2  | FLUID NOZZLE                   | 1               |
| 4        | DVXK-402     | INDEXING BAFFLE PLATE          | 1               |
| 5        | DVXK-411     | SPRAY HEAD KIT                 | 1               |
| 6 # + x  | 704403       | SCREW (KIT OF 3)               | 4               |
|          | DVXK-412     | SCREW (KIT OF 4)               |                 |
| 7 +      | 704401       | GASKET (KIT OF 2)              | 1               |
| 8 +      | DVXK-413     | BUFFER SEAL                    | 1               |
| 9        | DVXK-414     | HEAD                           | 1               |
| 10       | DVXK-415*    | CAM PIN                        | 1               |
| 11 # + x | S-28223X-K4  | O RING (KIT OF 4)              | 2               |
| 12 +     | DVXK-416     | NEEDLE PACKING KIT             | 1               |
| 13       | DVXK-417     | BODY                           | 1               |
| 14       | DVXK-418     | AIR TUBE                       | 1               |
| 15 + x   | DVXK-419     | SCREW & WASHER (KIT OF 4)      | 4               |
| 16       | S-28220X-K2  | O RING (KIT OF 2)              | 1               |
|          | S-28220X-K5  | O RING (KIT OF 5)              |                 |
| 17 +     | DVXK-420     | PISTON & SEAL KIT              | 1               |
| 18       | DVXK-421     | AIR VALVE PISTON (KIT OF 2)    | 2               |
| 19 +     | DVXK-422     | PISTON SPRING                  | 1               |
| 20       | SEE TABLE 2  | FLUID NEEDLE                   | 1               |
| 21 + x   | DVXK-423     | NEEDLE SPRING KIT              | 1               |
| 22       | DVXK-424     | RATCHET ASSEMBLY               | 1               |
| 23       | DVXK-425     | FIXED REAR HOUSING             | 1               |
| 24       | DVXK-426-BSP | BSP STANDARD MANIFOLD ASSEMBLY | 1               |
|          | DVXK-426-NPS | NPS STANDARD MANIFOLD ASSEMBLY |                 |
| 25       | DVXK-427-BSP | BSP MANIFOLD FLUID INSERT      | 1               |
|          | DVXK-427-NPS | NPS MANIFOLD FLUID INSERT      |                 |
| 26 + x   | SN-71X-K2    | O RING (KIT OF 2)              | 1               |
| 27       | DVXK-428     | SCREW (KIT OF 2)               | 2               |
| 28       | DVXK-429     | LONG FLUID RECIRCULATION PLUG  | 1               |
| 29       | DVXK-430     | SHORT FLUID RECIRCULATION PLUG | 1               |
| 30 + x   | SPA-29X-K4   | O RING (KIT OF 4)              | 4               |
| 31       | DVXK-431     | CAM SCREW KIT                  | 1               |
| 32       | DVXK-432     | CAM SCREW COVER                | 1               |

\* NOT USED WITH DVXK-443 SCREW MANIFOLD

**PARTS LIST (Continued)**

| REF. | PART No.    | DESCRIPTION                           | TOOL KIT |
|------|-------------|---------------------------------------|----------|
| 33   | DVXK-433    | RETAINING SCREW                       | 1        |
| 34   | DVXK-434    | LOCKING CAM                           | 1        |
| 35   | DVXK-445    | LEVER ADAPTOR                         | 1        |
| 36   | DVXK-435    | SET SCREW (KIT OF 2)                  | 2        |
| 37   | DVXK-436    | LONG AIR FEED PLUG                    | 1        |
| 38   | DVXK-437    | SHORT AIR FEED PLUG                   | 1        |
| 39   | DVXK-438    | AIR CONTROL VALVE ASSEMBLY (KIT OF 2) | 2        |
| 40   | DVXK-439    | O RING (KIT OF 2)                     | 4        |
| 41   | DVXK-440    | ADJUSTING KNOB & SCREW KIT            | 2        |
| 42   | DVXK-441    | ADJUSTING KNOB ONLY KIT               | 2        |
| 43   | DVXK-442    | BLANKING PLUG (KIT OF 2)              | 2        |
| 44   | DVXK-443    | SCREW MANIFOLD ASSEMBLY               | 1        |
| 45   | SPA-161-K2  | CLAMPING SCREW (KIT OF 2)             | 1        |
| 46   | S-28224X-K4 | O RING (KIT OF 4)                     | 1        |
| 47   | DVXK-444    | FLUID BUNG KIT                        | 1        |
| 48   | SPA-48X-K2  | O RING (KIT OF 2)                     | 2        |
| 49   | SPA-414-K   | CONTROL VALVE                         | 2        |
| 50   | SPA-446-K   | TOOL KIT                              | 1        |

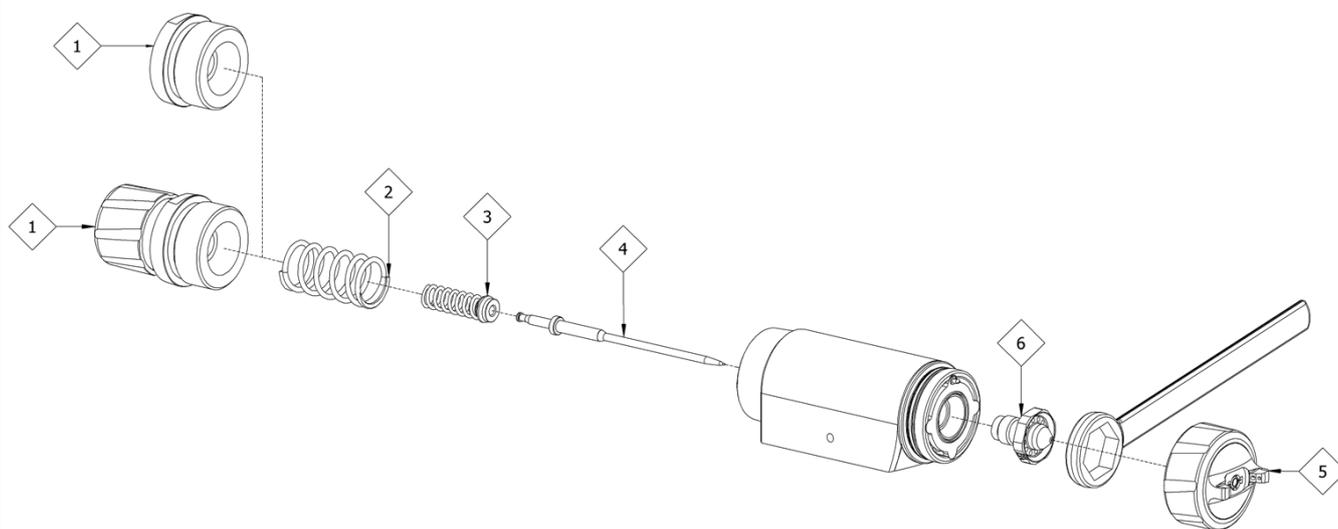
**SERVICE PARTS**

|          |                           |                         |
|----------|---------------------------|-------------------------|
| DVXK-446 | MINOR SERVICE KIT         | INCLUDES ITEMS MARKED # |
| DVXK-447 | MAJOR SERVICE KIT         | INCLUDES ITEMS MARKED + |
| DVXK-448 | MISCELLANEOUS SERVICE KIT | INCLUDES ITEMS MARKED x |

**MAINTENANCE**

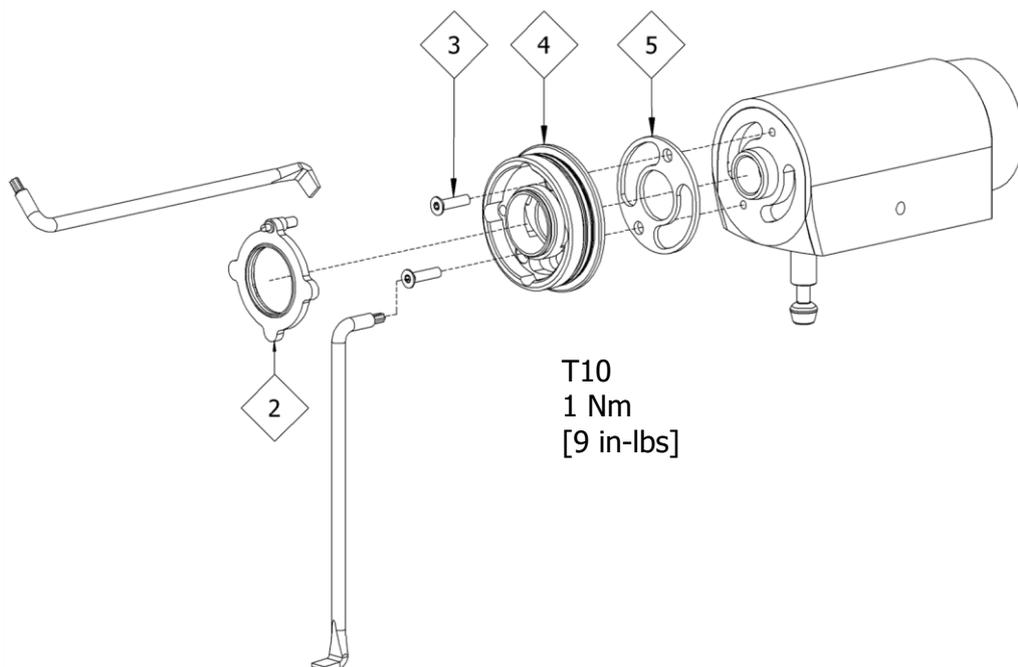
| <b>KEY - MAINTENANCE SYMBOLS</b>  |  |
|---|--|
|  | Order for disassembly<br><i>(Reverse for assembly)</i> |
|  | Petroleum Grease/Jelly                                 |
|  | Thread Locker  |

**FLUID NOZZLE & FLUID NEEDLE DISASSEMBLY**

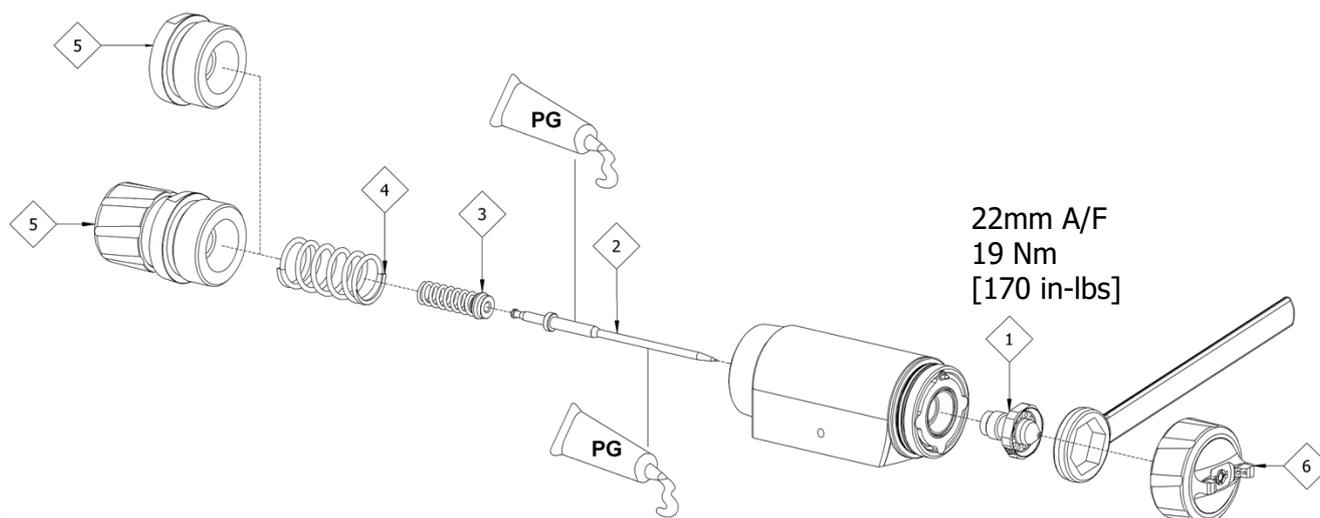


## SPRAYHEAD DISASSEMBLY

- 1 Follow steps from Fluid Nozzle & Needle Disassembly (Page 24)



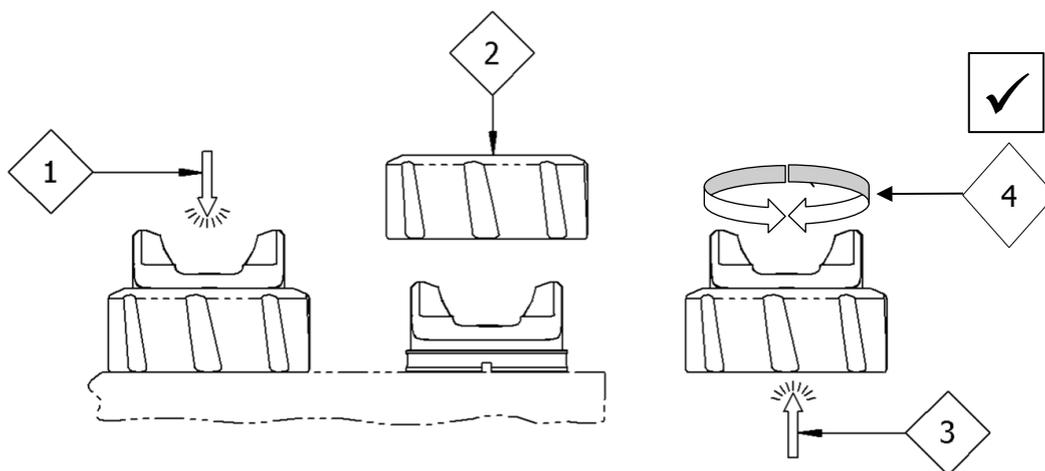
## FLUID NOZZLE & FLUID NEEDLE ASSEMBLY



### NOTE

When changing the fluid nozzle or fluid needle, replace nozzle, needle and fluid packing at the same time. Using worn parts can cause fluid leakage. Do not overtighten.

## AIR CAP - DISASSEMBLY &amp; ASSEMBLY

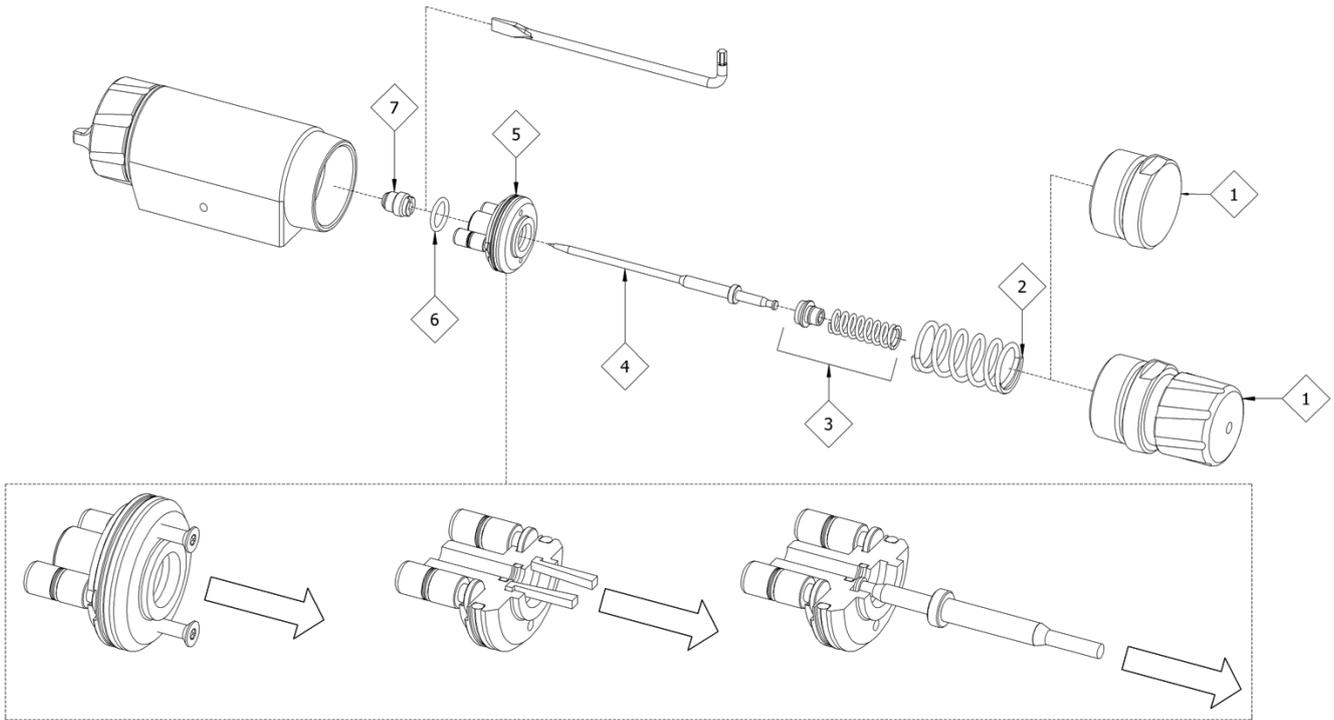


## NOTE

When removing the air cap from the retaining ring, take care not to damage any plastic components also inside the ring. They are not available as separate spare parts.

Simply wipe parts clean and reassemble with new or clean air cap.

**PISTON & NEEDLE PACKING - DISASSEMBLY**

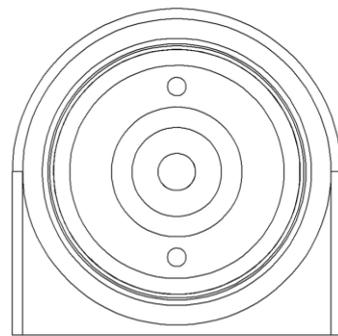
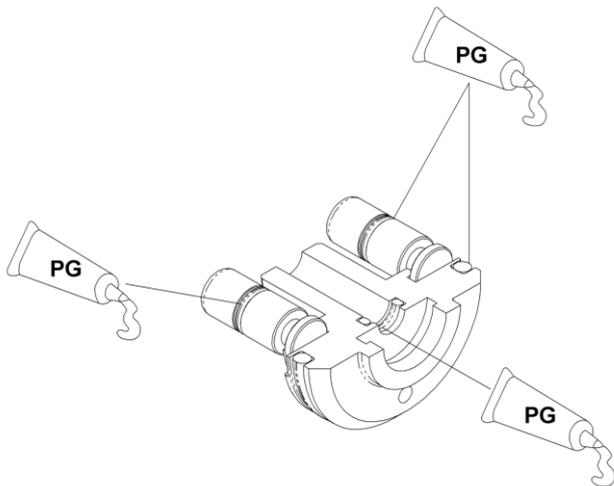


M3 SCREWS\*

PLIERS\*

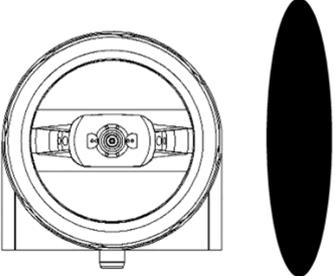
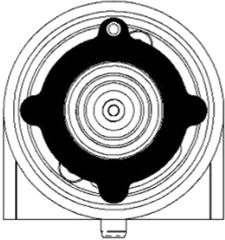
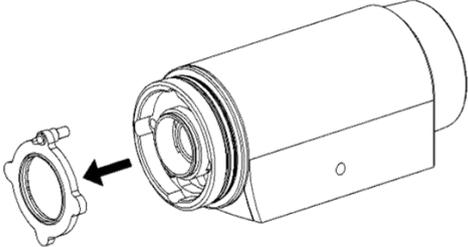
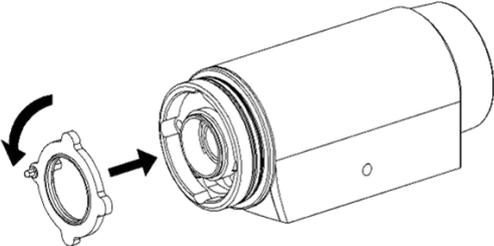
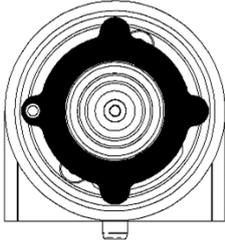
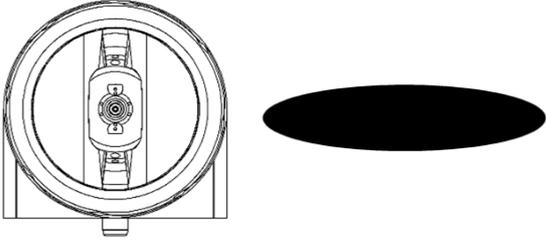
FLUID NEEDLE\*

\*DIFFERENT METHODS TO REMOVE THE PISTON FROM THE GUN

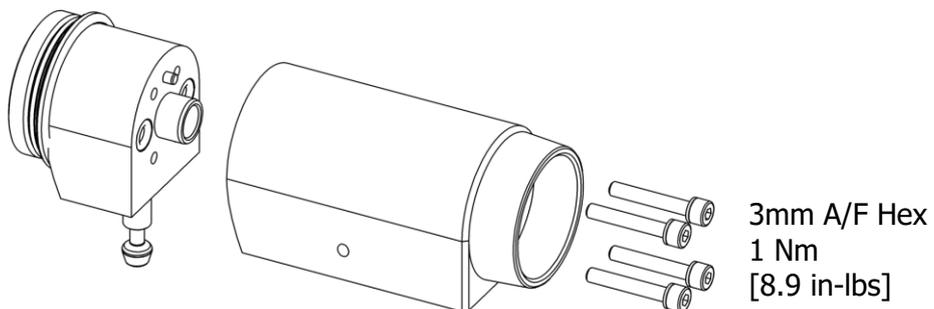


NOTE ORIENTATION OF M3 THREAD HOLES WHEN REASSEMBLING PISTON

**AIR CAP INDEXING ADJUSTMENT**

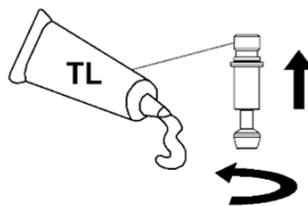
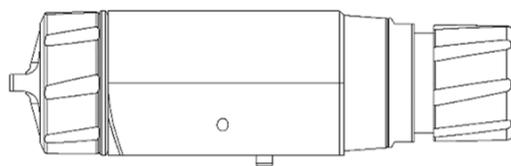
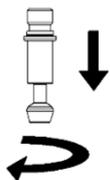
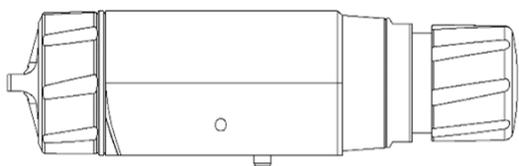
|   |  |
|---|--|
| <p><b>STEP 1.</b></p>    | <p><b>STEP 2.</b></p> <p>FOLLOW STEPS FROM FLUID NOZZLE &amp; FLUID NEEDLE DISASSEMBLY (PAGE 23)</p>       |
| <p><b>STEP 3.</b></p>    | <p><b>STEP 4.</b></p>    |
| <p><b>STEP 5.</b></p>  | <p><b>STEP 6.</b></p>  |
| <p><b>STEP 7.</b></p> <p>FOLLOW STEPS FROM FLUID NOZZLE &amp; FLUID NEEDLE ASSEMBLY (PAGE 24)</p>         | <p><b>STEP 8.</b></p>  |

### HEAD & BODY - DISASSEMBLY



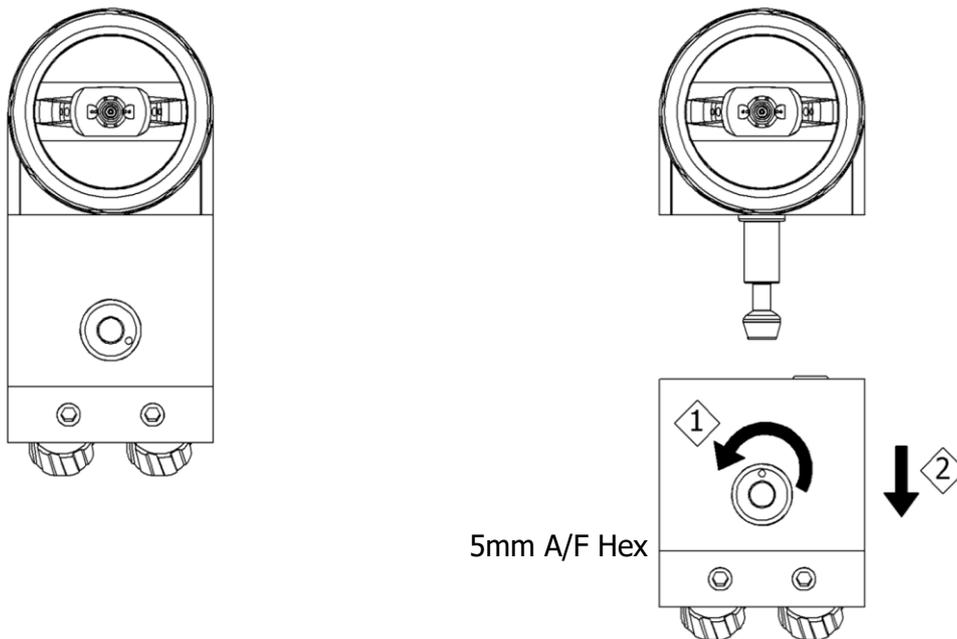
### CAM PIN - DISASSEMBLY/ASSEMBLY

Cam pin is not used with the screw manifold.



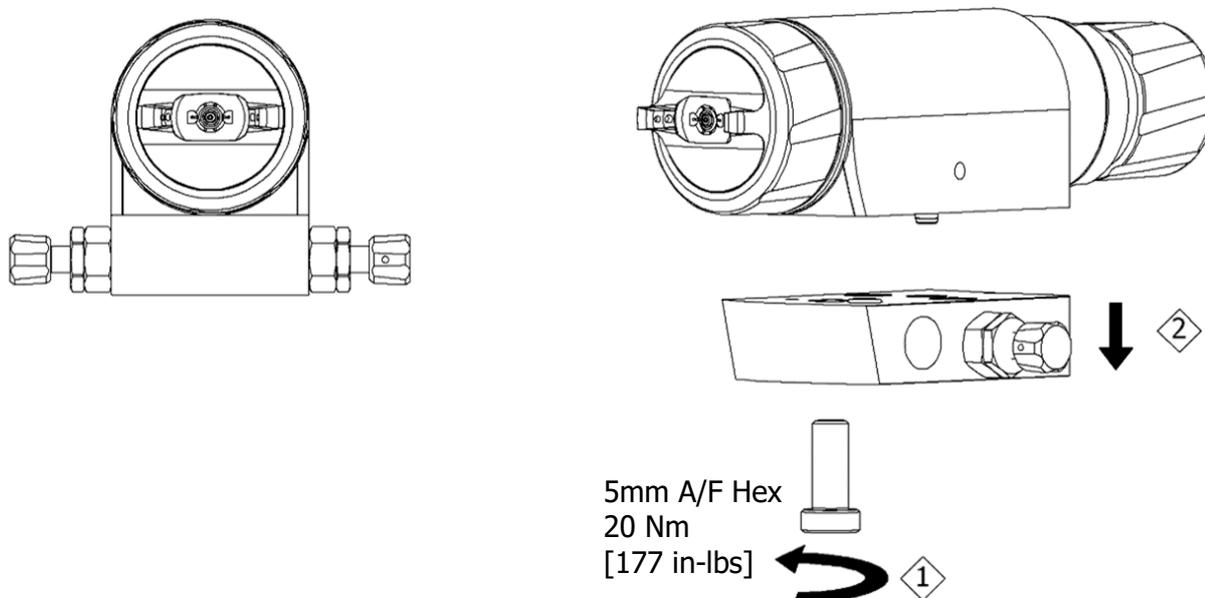
3mm A/F Hex  
15 Nm  
[133 in-lbs]

**STANDARD MANIFOLD - REMOVAL**

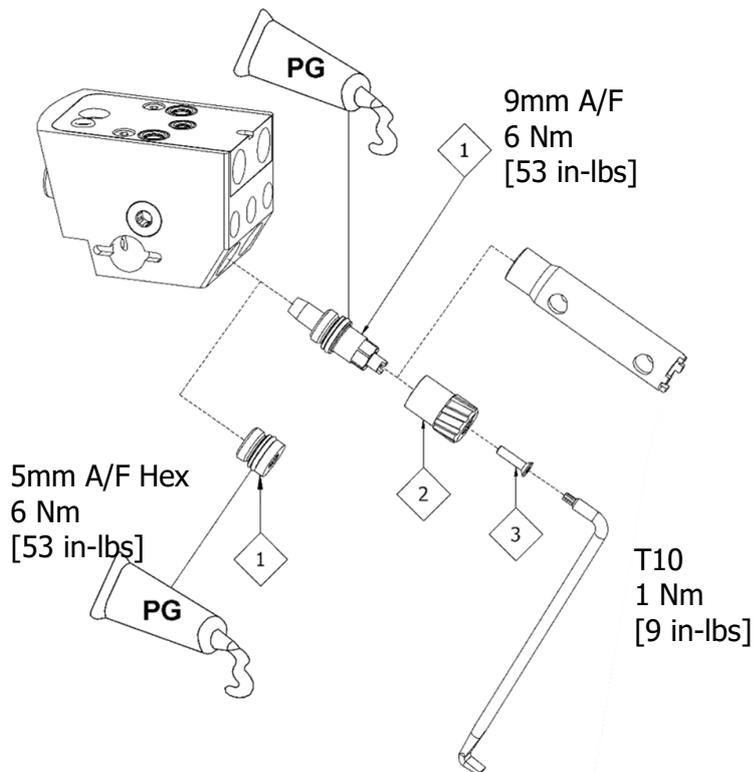


**SCREW MANIFOLD - REMOVAL**

Cam pin is not used with the screw manifold.



**CONTROL VALVES/PLUGS - ASSEMBLY**



## TROUBLESHOOTING MECHANICAL PERFORMANCE

| GENERAL FAULTS   | CAUSE  | CORRECTION  |
|--|--|---|
| Will not spray.  | No air pressure at gun.                        | Check all air supplies and hoses.   |
|  | Fluid needle not moving.                       | Check needle control knob position and Cylinder air pressure =>4 bar [58 psi] |
| Gun spits paint when triggering on and off.  | Incorrect needle fitted to gun.                | Check fluid nozzle/needle selection chart and fit correct item.               |
|  | Excessive needle wear.                         | Replace with new needle.  |
|  | Excessive fluid nozzle wear.                   | Replace with new fluid nozzle   |
| Gun spits paint when triggering on due to paint build-up inside air cap between spraying operations. | Fluid nozzle not fitted correctly in gun head. | Check nozzle and head sealing surfaces for damage and/or tighten              |
|  | Fluid nozzle/needle leakage.                   | Check for damage or blockage.   |
| Paint build-up on fluid nozzle   | Fluid nozzle not fitted correctly in gun head. | Check nozzle and head sealing surfaces for damage and/or tighten              |
|  | Fluid nozzle/needle leakage.                   | Check for damage or blockage.   |
| Paint build-up on air cap exterior   | Damaged air cap holes.                         | Replace with new air cap.   |
|  | Gradual build-up of bounce-back on gun head.   | Thoroughly clean air cap & check booth air flow                               |
| Unable to get round spray  | Fluid nozzle or sprayhead incorrectly fitted.  | Remove, check components for damage and refit correctly.                      |

When removing the air cap from the retaining ring, take care not damage any plastic components also inside the ring. Simply wipe parts clean and reassemble with a new or clean air cap.

| FLUID FAULTS  | CAUSE   | CORRECTION  |
|---|---|---|
| Slow fluid leak from fluid tip and needle seat.                   | Fluid nozzle internal seat scored damaged or worn.                      | Replace.  |
|   | Fluid needle external profile damaged or worn.                          |   |
|   | Contamination on needle or nozzle mating surfaces preventing good seal. | Thoroughly clean.   |
|   | Incorrect fluid nozzle for fluid needle fitted to gun.                  | Check nozzle/needle selection chart and fit correct item.                               |
|   | Slow needle movement.   | Remove and clean or replace Needle Packing. Check Needle spring for damage or breaking. |
| Major fluid leak or fluid jetting from fluid tip and needle seat. | Contamination on needle or nozzle mating surfaces preventing good seal. | Remove nozzle and needle and thoroughly clean.  |
|   | Incorrect fluid nozzle for fluid needle fitted to gun.                  | Check nozzle/needle selection chart and fit correct item.                               |
| Slow fluid leak from needle packing.                              | Fluid needle packing worn or incorrectly fitted.                        | Tighten or replace as necessary.  |

| AIR FAULTS   | CAUSE  | CORRECTION   |
|--|--|--|
| Small air leak from air cap when gun is not triggered. | Piston air valve seals not seating correctly | Remove Piston and thoroughly clean and lubricate or renew piston assembly. |
|  | Piston seal damaged or missing.              | Replace.   |

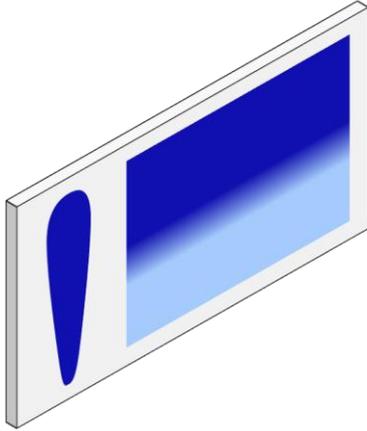
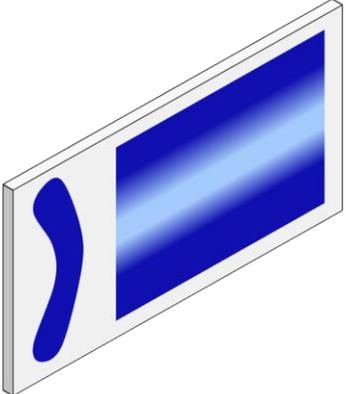
#### LEVER TYPE MANIFOLD FAULTS

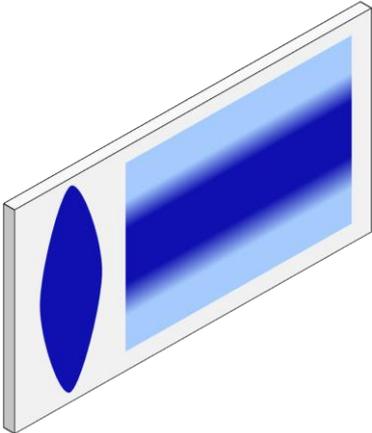
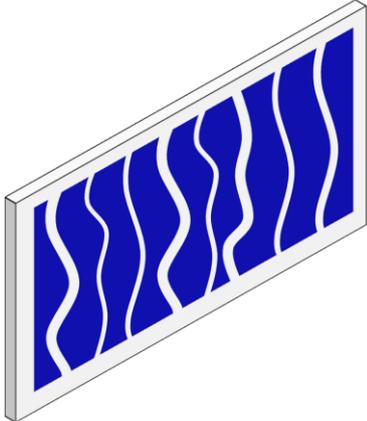
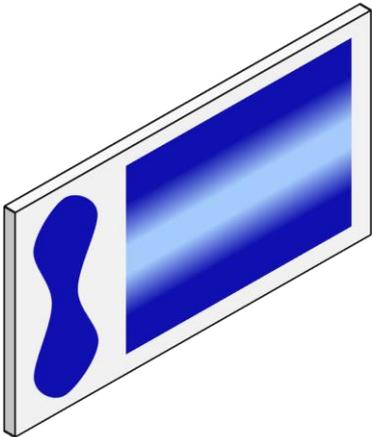
| ASSEMBLY FAULTS                                  | CAUSE                                      | CORRECTION   |
|--|--|--|
| Spray gun does not locate onto manifold.         | Locking cam is not in the unlock position. | Turn locking cam lever to unlock position on manifold. |
| Spray gun is loose when assembled onto manifold. | Locking cam has not been tightened.        | Turn locking cam lever to lock position on manifold.   |
|  | Locking cam has worn.                      | Replace using locking cam kit SPA-424-K                |
| Spray gun cannot be removed from manifold.       | Locking cam is not in the unlock position. | Turn locking cam lever to unlock position on manifold. |
| Air or Fluid leak from between gun and manifold. | Worn, damaged or missing O rings           | Replace damaged/missing items                          |

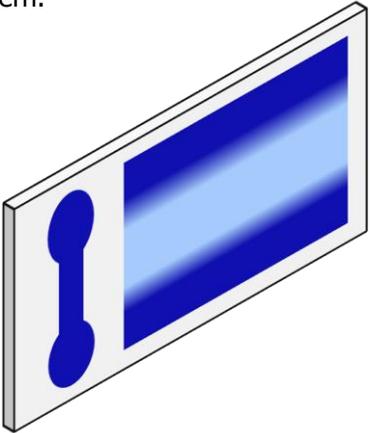
### SCREW TYPE MANIFOLD FAULTS

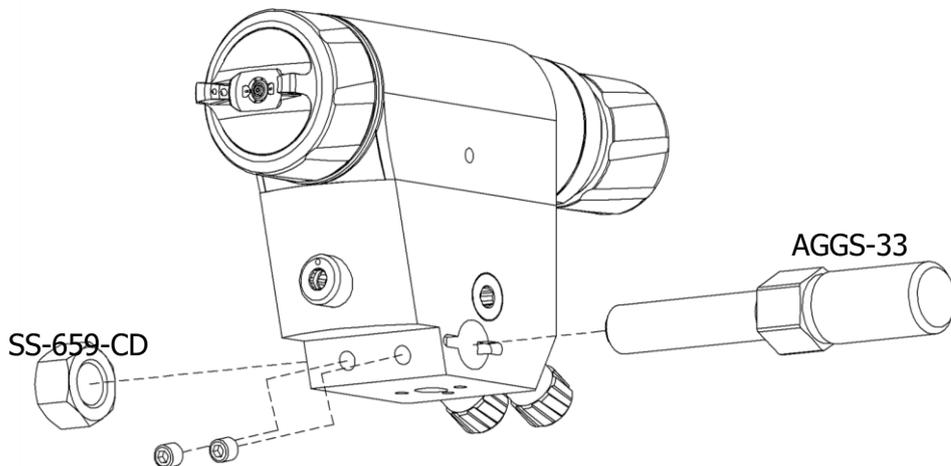
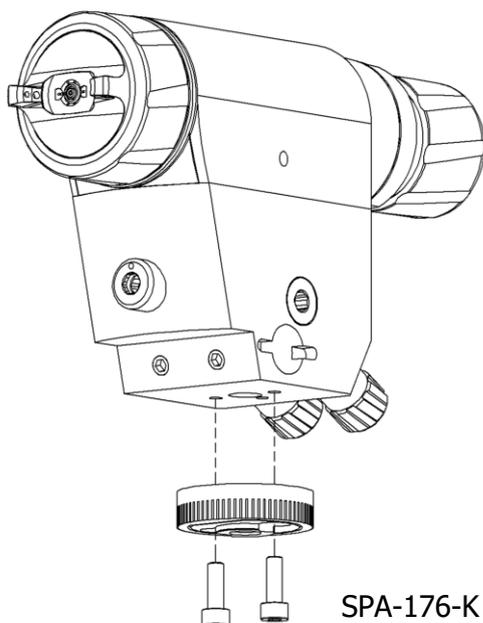
| ASSEMBLY FAULTS                                  | CAUSE                                  | CORRECTION                                   |
|--|--|--|
| Spray gun does not locate onto manifold.         | Item 29 - locking pin still in place.  | Remove item 29 - locking pin.                |
| Spray gun is loose when assembled onto manifold. | Clamping screw has not been tightened. | Tighten screw.                               |
|  | Clamping screw has worn.               | Replace using clamping screw kit SPA-161-K2. |
| Spray gun cannot be removed from manifold.       | Clamping screw still in place.         | Remove clamping screw.                       |
| Air or Fluid leak from between gun and manifold  | Worn, damaged or missing O rings       | Replace damaged/missing items                |

## TROUBLESHOOTING SPRAY PERFORMANCE

| CONDITION   | CAUSE   | CORRECTION   |
|---|---|--|
| Heavy top or bottom pattern.<br>   | Contamination build-up on air cap, plugged horn holes, centre holes or jets.    | Soak cap or nozzle in suitable cleaning liquid and thoroughly clean. |
|   | Contamination build-up on fluid nozzle exterior or partially plugged fluid tip. |  |
|   | Fluid nozzle or cap dirty or damaged.   | Replace fluid nozzle or air cap if necessary.                        |
| Heavy right or left side pattern.<br>   | Left or right side holes plugged.   | Soak cap or nozzle in suitable cleaning liquid and thoroughly clean. |
|   | Dirt or damage on left or right side of fluid nozzle exterior.                  | Replace fluid nozzle or air cap if necessary.                        |
| <b>Checking procedure for top-heavy, bottom-heavy, right-heavy and left-heavy spray patterns.</b>   |   |  |
| <p>Determine if the obstruction is on the air cap or the fluid nozzle. Do this by making a test spray pattern and then rotate the cap one-half turn and spray another pattern. If the defect is inverted, obstruction is on the air cap. Clean the air cap as previously instructed. Also check for dried paint just inside the cap centre hole opening, remove by washing with a suitable cleaning liquid..</p> <p>If the defect is not inverted, it is on the fluid nozzle. Clean nozzle. If problem persists, renew nozzle.</p> <p>Also check for damage to critical air cap and fluid nozzle surfaces and all hole edges.</p> |   |  |

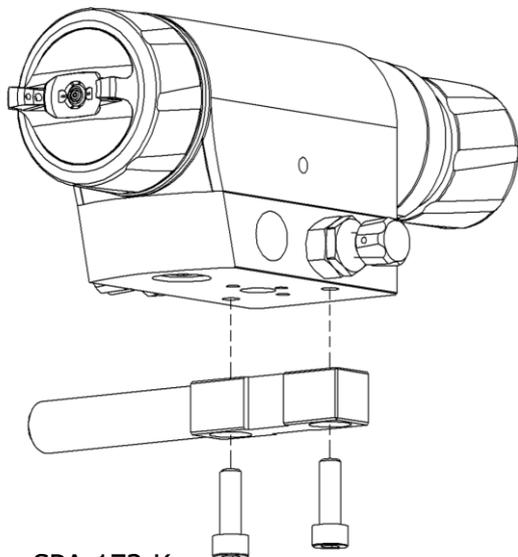
|   |   |   |
|---|---|---|
| <p>Heavy centre pattern.</p>                     | Pattern adjustment valve set too low.             | Turn out counter clockwise to achieve correct pattern.  |
|   | Too much coating                                  | Reduce fluid flow by turning fluid needle adjusting screw clockwise.<br>Reduce fluid pressure.  |
|   | Coating too thick.                                | Thin to correct viscosity   |
|   | Atomising air pressure too low.                   | Increase air pressure.  |
| <p>Intermittent or 'fluttering' spray fan.</p>  | Loose fluid tip.                                  | Tighten.  |
|   | Fluid nozzle not seated correctly in gun head.    | Remove fluid nozzle, clean components, check cone seating on tip and gun for damage or contamination.                                 |
|   | Partially obstructed fluid passage or fluid hose. | Clean or replace.   |
| <p>Split spray pattern</p>                     | Not enough coating flow.                          | Increase fluid flow by changing fluid nozzle size, opening needle control knob or increase fluid pressure on pressure feed container. |
|   | Too high horn pressure.                           | Reduce pattern / Horn air pressure  |
|   | Too much air for fluid quantity used.             | Reduce input air pressure.  |

|  |                                    |   |
|--|------------------------------------|---|
| <p>Ball end heavy pattern.</p>  | Too much fluid flow.               | Reduce fluid flow. Change fluid tip for smaller size or change air cap for different specification air cap.       |
| Excessive bounce-back.   | Too much atomisation air pressure. | Reduce air pressure.  |
|  | Gun too far from surface.          | Check distance (normally 150-200mm).  |
| Runs and sags.   | Too much fluid flow.               | Adjust gun or reduce fluid pressure.  |
|  | Material viscosity too low.        | Mix properly or apply light coats/reduce fluid flow.  |
|  | Gun tilted at an angle.            | Mount gun at right angle to work.   |
| Thin, sandy coarse finish drying before it flows out.  | Gun too far from surface.          | Check distance.   |
|  | Too much air pressure.             | Reduce air pressure and check spray pattern.  |
|  | Fluid flow too low.                | Increase fluid flow by changing fluid tip size, supply pressure or turning needle control knob counter clockwise. |

**MOUNTING ADAPTOR OPTIONS - STANDARD MANIFOLD****SPK-110  
Mounting bar.****SPA-176-K  
Index adjustment and screws**

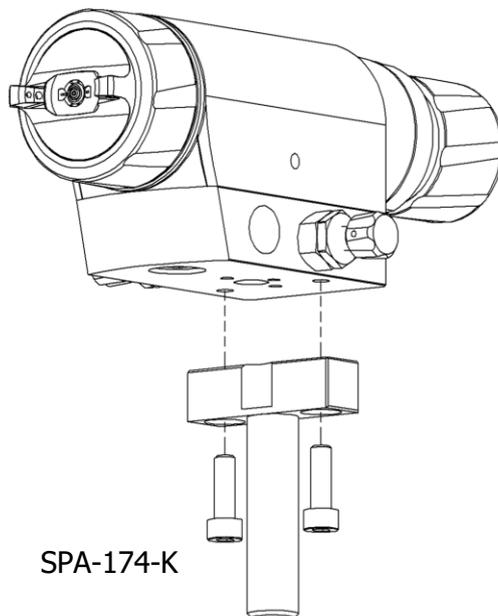
**MOUNTING ADAPTOR OPTIONS - SCREW MANIFOLD**

**SPA-173-K**  
Horizontal mounting bar and screws.



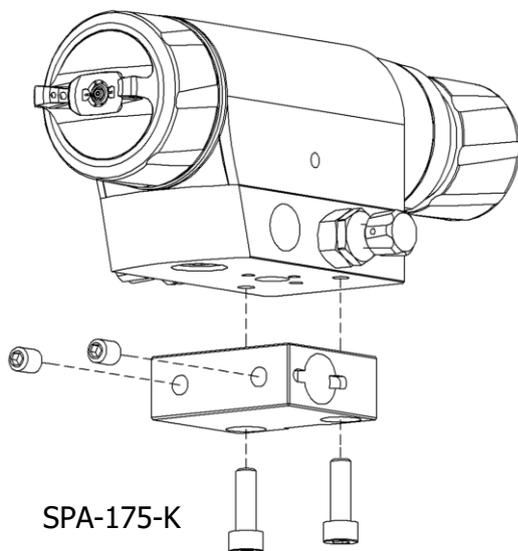
SPA-173-K

**SPA-174-K**  
Vertical mounting bar and screws.



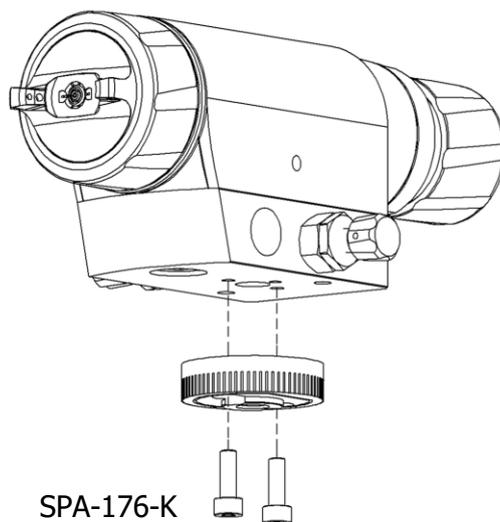
SPA-174-K

**SPA-175-K**  
Mounting block and screws.



SPA-175-K

**SPA-176-K**  
Index adjustment and screws.



SPA-176-K

## ACCESSORIES

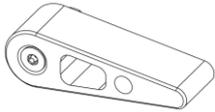
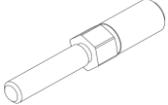
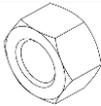
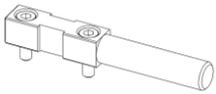
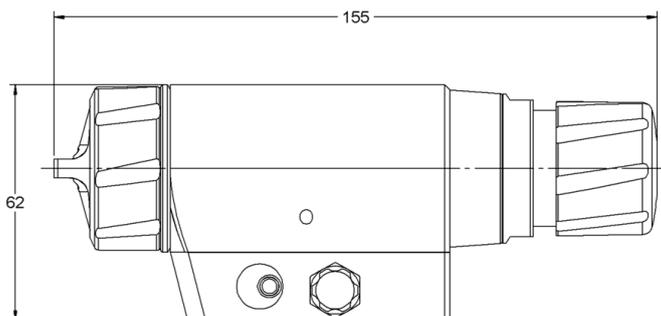
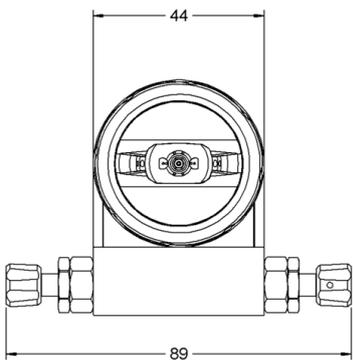
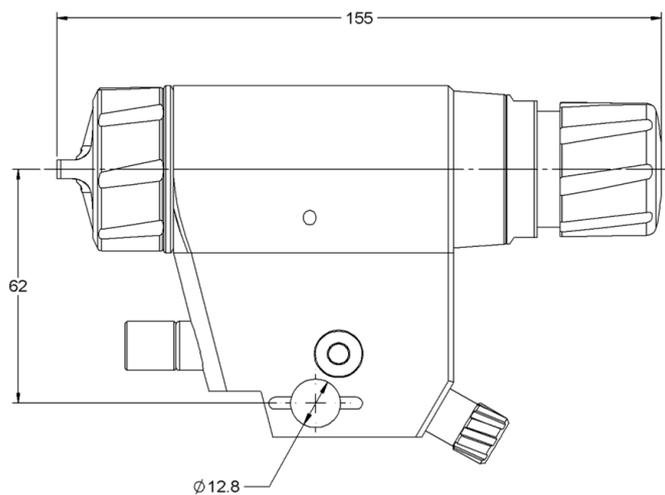
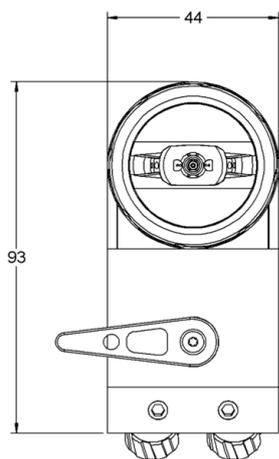
| Part No.  | Description                         |   |
|-----------|-------------------------------------|---|
| DVXK-445  | Lever Adaptor                       |    |
| SPK-110   | Mounting bar.                       |    |
|           | Mounting bar nut.                   |    |
| SPA-173-K | Horizontal mounting bar and screws. |    |
| SPA-174-K | Vertical mounting bar and screws.   |    |
| SPA-175-K | Lever Adaptor                       |   |
| SPA-176-K | Index adjustment and screws.        |  |
| DVXK-410  | Non Indexing Baffle Plate           |  |

TABLE 8 - DVXA AIR CAP TEST KITS

| Part No. | Air Cap & Type |           | *** Recommended Air Inlet Pressure | Atomisation Pressure |
|----------|----------------|-----------|------------------------------------|----------------------|
| DVXK-P1T | P1             | HVLP PLUS | 2.0 bar [29 psi]                   | 0.69 bar [10 psi]    |
| DVXK-P2T | P2             | HVLP PLUS | 2.0 bar [29 psi]                   | 0.69 bar [10 psi]    |
| DVXK-P3T | P3             | HVLP PLUS | 2.0 bar [29 psi]                   | 0.69 bar [10 psi]    |

\*\*\* (with gun fully triggered)

DIMENSIONS



NOTES

## WARRANTY POLICY

This product is covered by Binks materials and workmanship limited warranty.

The use of any parts or accessories, from a source other than Binks, will void all warranties. Failure to reasonably follow any maintenance guidance provided, may invalidate any warranty.

For specific warranty information please contact Binks.

For technical assistance or to locate an authorised distributor, contact one of our international sales and customer support locations below.

| REGION                      | BINKS CONTACT            |
|-----------------------------|--------------------------|
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| Europe, Africa, Middle East | Tel: +44 (0)1202 571 111 |
| India                       | marketingroa@binks.com   |
| China                       | Tel: +8621-3373 0108     |
| Korea                       | Tel: +82313663303        |
| Japan                       | Tel: +81 45 785 6421     |
| Australia                   | Tel: +61 (0) 2 8525 7555 |

## WARRANTY PAGE





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