

Operating Instructions and Spare Parts List

ADU 1 Air Distribution Unit

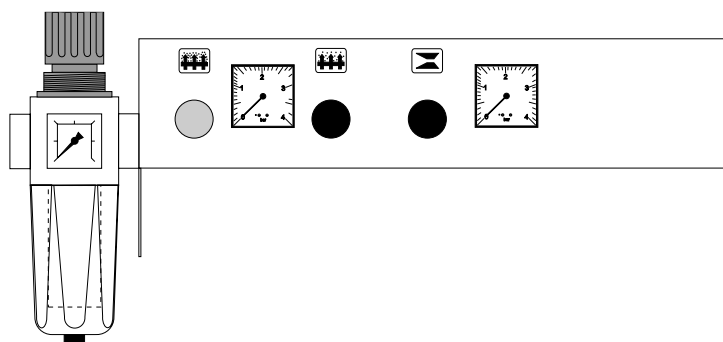


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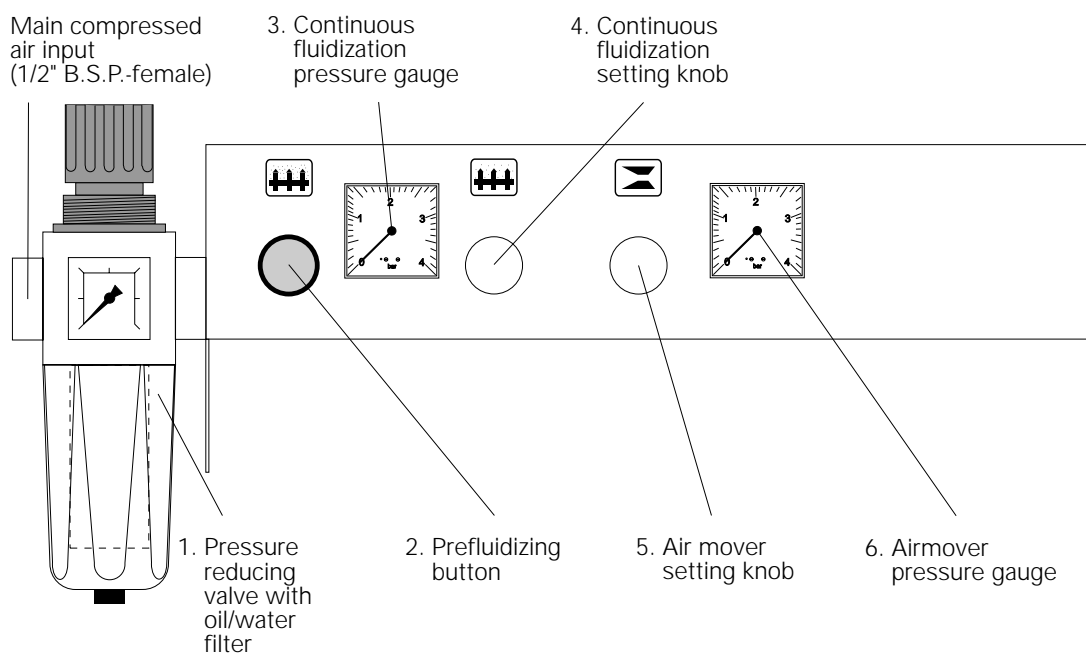
ADU 1 Air distribution unit

Description

This unit serves to distribute air to the module control units, control the fluidizing air, and the air mover.

Prefluidization must be operated manually.

The prefluidizing air operates immediately after compressed air is fed into the ADU 1.



Front view of the ADU 1 Air distribution unit

Figure 1

Technical specifications :

Pneumatic data :

| | |
|---------------------|--|
| Input pressure : | 7-10 bar |
| Air consumption : | Depending on the number of units connected |
| Max. water vapour : | 1.3 g/m ³ |
| Max. oil vapour : | 0.1 ppm. |

Adjusting the powder fluidization

The fluidization of the powder in the hopper depends on the characteristic of the powder, the humidity, and the ambient air temperature. For this reason the ADU 1 Air distribution unit contains prefluidization, and continuous fluidization adjustment.

The unit should be connected to a main compressed air supply with 7 - 10 bar.

Fluidization is adjusted as follows :

1. Open the connection from the main compressed air circuit. Compressed air should now flow through the ADU 1 Air distribution unit.
2. Adjust the pressure on the pressure reducing valve (**1** - *Fig. 1*) to 7 bar.
3. Check the fluidizing of the powder in the hopper. If the powder is not "boiling", press the prefluidization button (**2** - *Fig. 1*) for a short time, once or twice.

This should "loosen up" the powder. When the powder begins to "boil", adjust the fluidizing air with the continuous fluidization setting knob (**4** - *Fig. 1*) until the "boiling" is evenly distributed over the surface of the powder in the hopper. The pressure can be finely adjusted by using the continuous fluidization pressure gauge (**3** - *Fig. 1*).

Adjusting the airmover of the powder hopper

Fluidizing air in the powder hopper produces overpressure. Since this adversely effects the conveyance of powder, this overpressure must be eliminated. For this purpose an airmover is installed on the powder hopper. The airmover is similar to an injector.

Its function is to produce a small negative pressure in the powder hopper.

The amount of air to be removed depends on the size of the hopper and/or the amount of fluidizing air.

If a cloud of powder rises above the surface and tries to flow out of the hopper through the cover opening the airmover air pressure should be adjusted. This is done with the airmover setting knob (**5 - Fig. 1**) and airmover pressure gauge (**6 - Fig. 1**). The pressure should be increased until the powder cloud remains inside the hopper.

After these adjustments have been made, the ADU 1 Air distribution unit does not have to be reset when starting up again.

When the adjustments are completed the main switch of the cabinet can be switched on and the powder gun(s) can be adjusted.

(See PG 1(-A) Manual powder gun, and PGC 1 Powder control modul operating manuals)

Airmover connection (rear view of the ADU 1)

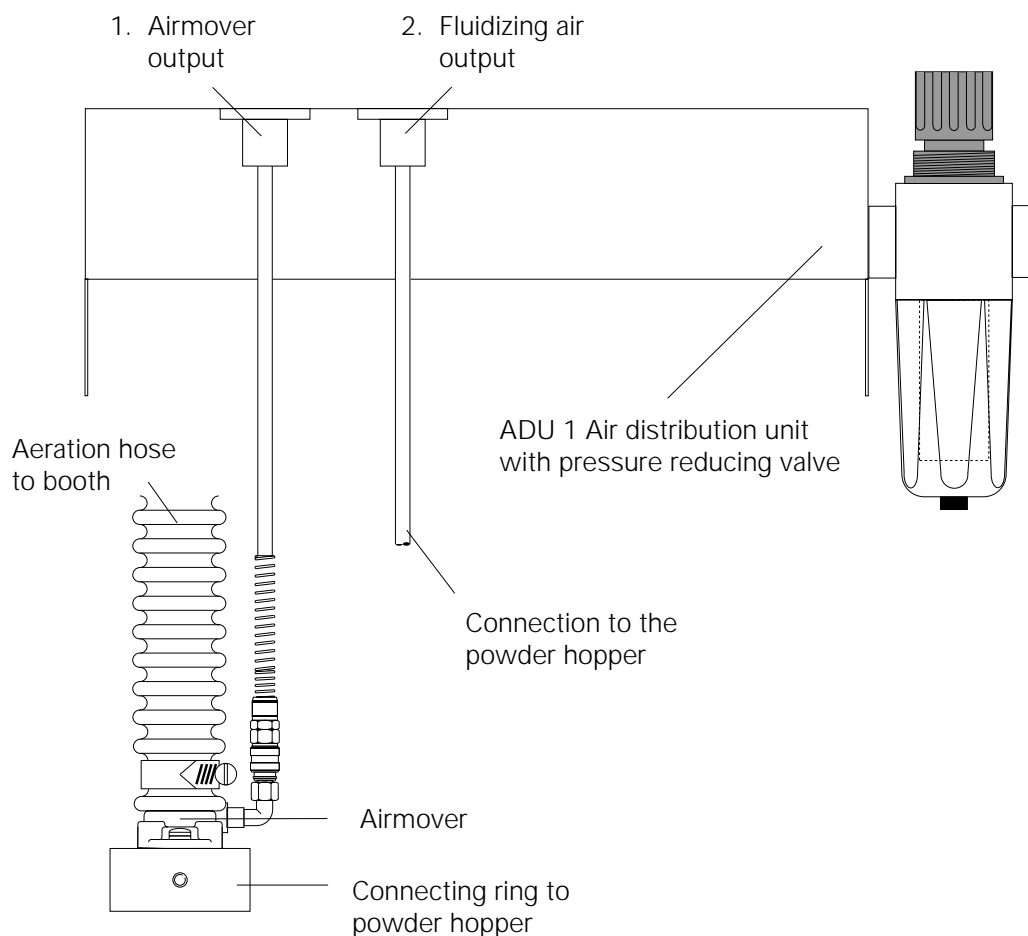


Figure 2

Notes :

Spare Parts List

Ordering Spare Parts

When ordering spare parts for powder coating equipment, please indicate the following specifications :

1. Type, and serial number of your powder coating equipment
2. Order number, quantity, and description of *each* spare part

Example:

1. Type ADU 1, **Serial no:** XXXX XXXX

2. Order no: 235 814, 1 piece, Pressure gauge

When ordering cable or hose material the length required must also be given. The spare part numbers of this yard/metre ware is always marked with an *.

The spare part number of yard/metre ware always begins with 1..

All wear parts are marked with a #.

All dimensions of plastic powder hoses are given as external and internal diameters :
e.g. $\varnothing 8 / 6$ mm = 8 mm outside diameter (o/d) / 6 mm inside diameter (i/d).

ADU 1 Control unit (for use with PH 50 / 100)

| | | |
|----------|--|----------|
| | ADU 1 Control unit (complete) | 340 073 |
| 1 | Plastic tube connector - 1/8" / ø 6 mm | 233 412 |
| 2 | Pressure gauge - 1/8" - 0-4 bar | 235 814 |
| 3 | Nut - M14 x 1 | 302 163 |
| 4 | Control knob | 200 069 |
| 5 | Pressure regulator | 241 369 |
| 6 | Prefluidizing valve | 225 843 |
| 7 | Prefluidizing valve button | 203 483 |
| 8 | Adapter - ø 6 / 4 mm | 225 835 |
| 9 | Angular connector - ø 6 / ø 8 mm | 237 990 |
| 10 | Angular distributor - 3/8" - 10x ø 8 mm | 238 007 |
| 11 | Plug - 3/8" | 203 319 |
| 12 | Check valve - 1/8" - 1/8" | 202 240 |
| 13 | Connector - 3/8"-1/4" | 238 015 |
| 14 | Plastic tube connector - 1/4"-ø 6 mm | 233 404 |
| 15 | Pressure gauge bracket | 338 443 |
| 16 | Y-connection piece | 235 369 |
| 17 | Adapter - 1/8"-1/4" | 202 487 |
| 18 | Plastic hose - ø 6 / 4 mm | 103 144* |
| 19 | Lead-through - 1/2"-1/2" | 202 967 |
| 20 | Input pressure reducing valve | 240 133 |
| 21 | Pressure gauge - 0-7 bar | 203 289 |
| 22 | Plug | 238 023 |
| 23 | Air connection ring - 3/8" | 241 970 |
| 24 | Hose clamp ring | 203 386 |
| 25 | Solaflex hose - ø 16 / 10 mm | 100 498* |
| 26 | Air connection adapter - 3/8" (Single adapter) | 241 997 |
| 27 | Adapter - 3/8"- 3/8" | 242 020 |
| 28 | Cap nut - 3/8" | 203 157 |
| 29 | Hose nipple | 203 165 |
| 30 | Plastic hose - ø 6 / 4 mm (black) | 103 152* |
| 31 | Quick-release connector - ø 8 / 6 mm | 203 181 |
| 32 | Quick-release connector | 239 267 |
| 33 | Air connection ring - ø 8 mm | 241 989 |
| 34 | Plastic hose - ø 8 / 6 mm (black) | 103 756* |
| 35 | Braided copper wire | 103 373* |
| A | <i>When connecting 6 or 7 PGC units</i> | |
| 36 | Elbow connection - ø 8 / 8 mm | 238 287 |
| B | <i>When connecting 8, 9 or 10 PGC units</i> | |
| 37 | Air connection adapter | 225 762 |
| 38 | Air connection screw, incl. gasket (item 39) | |
| | Single adapter | 231 843 |
| | Double adapter | 237 230 |
| | Triple adapter | 222 623 |

ADU 1 Control unit (for use with PH 50 / 100)
 (seen from below)

| | | |
|----|---|---------|
| 39 | Gasket | 225 487 |
| 50 | Solenoid valve | 243 655 |
| | Solenoid valve coil 220 VAC (for item 50) | 243 663 |
| 51 | Adapter 3/8"-1/2" | 244 317 |

* Indicate length required

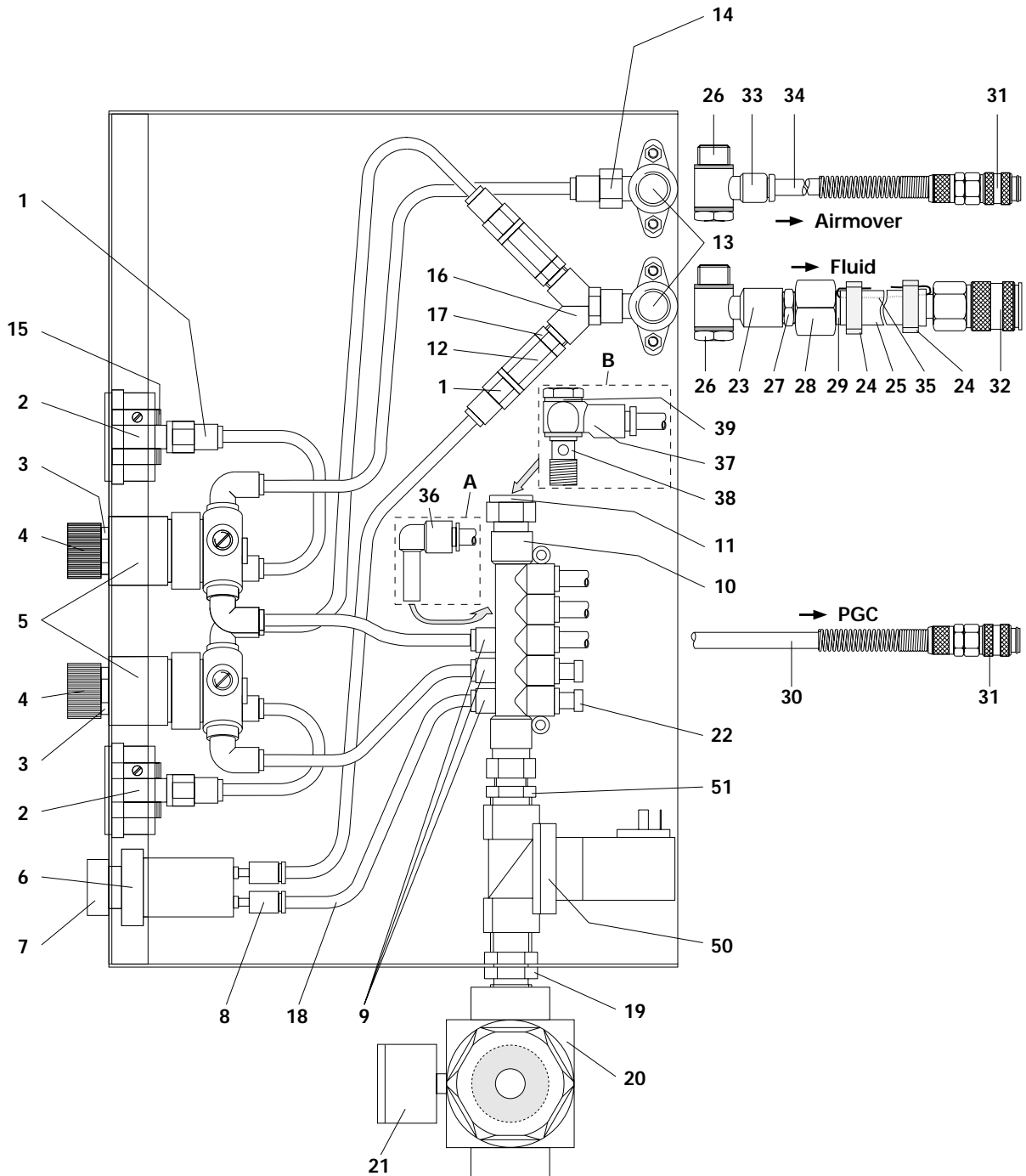


Figure 3

ADU 1 Control unit (for use with PH 150 / 200)

| | | |
|----------|--|----------|
| | ADU 1 Control unit (complete) | 349 879 |
| 1 | Plastic tube connector - 1/8" / ø 6 mm | 233 412 |
| 2 | Pressure gauge - 1/8" - 0-4 bar | 235 814 |
| 3 | Nut - M14 x 1 | 302 163 |
| 4 | Control knob | 200 069 |
| 5 | Pressure regulator | 241 369 |
| 6 | Prefluidizing valve | 225 843 |
| 7 | Prefluidizing valve button | 203 483 |
| 8 | Adapter - ø 6 / 4 mm | 225 835 |
| 9 | Angular connector - ø 6 / ø 8 mm | 237 990 |
| 10 | Angular distributor - 3/8" - 10x ø 8 mm | 238 007 |
| 11 | Plug - 3/8" | 203 319 |
| 13 | Connector - 3/8"-1/4" | 238 015 |
| 14 | Plastic tube connector - 1/4"-ø 6 mm | 233 404 |
| 15 | Pressure gauge bracket | 338 443 |
| 18 | Plastic hose - ø 6 / 4 mm | 103 144* |
| 19 | Lead-through - 1/2"-1/2" | 202 967 |
| 20 | Input pressure reducing valve | 240 133 |
| 21 | Pressure gauge - 0-7 bar | 203 289 |
| 22 | Plug | 238 023 |
| 23 | Air connection ring - 3/8" | 241 970 |
| 24 | Hose clamp ring | 203 386 |
| 25 | Solaflex hose - ø 16 / 10 mm | 100 498* |
| 26 | Air connection adapter - 3/8" (Single adapter) | 241 997 |
| 27 | Adapter - 3/8"- 3/8" | 242 020 |
| 28 | Cap nut - 3/8" | 203 157 |
| 29 | Hose nipple | 203 165 |
| 30 | Plastic hose - ø 6 / 4 mm (black) | 103 152* |
| 31 | Quick-release connector - ø 8 / 6 mm | 203 181 |
| 32 | Quick-release connector | 239 267 |
| 33 | Air connection ring - ø 8 mm | 241 989 |
| 34 | Plastic hose - ø 8 / 6 mm (black) | 103 756* |
| 35 | Braided copper wire | 103 373* |
| A | <i>When connecting 6 or 7 PGC units</i> | |
| 36 | Elbow connection - ø 8 / 8 mm | 238 287 |
| B | <i>When connecting 8, 9 or 10 PGC units</i> | |
| 37 | Air connection adapter | 225 762 |
| 38 | Air connection screw, incl. gasket (item 39) | |
| | Single adapter | 231 843 |
| | Double adapter | 237 230 |
| | Triple adapter | 222 623 |
| 39 | Gasket | 225 487 |
| 40 | Y-connector - 3 x ø 6 mm | 244 937 |
| 41 | Quick-release connector - ø8 / ø8 mm | 238 287 |
| 42 | Plastic hose - ø 8 / 6 mm (black) | 103 152* |
| 43 | Elbow connection - ø 3/8 "-ø 8 mm | 240 010 |
| 44 | Elbow connector - 3/8"-3/8" | 223 158 |
| 45 | Elbow connection - 1/8"-1/8" | 235 733 |

* Indicate length required

ADU 1 Control unit (for use with PH 150 / 200)
(seen from below)

| | | |
|----|--|---------|
| 46 | Pressure regulator- 3/8" (Remote) | 244 384 |
| 47 | Shuttle valve | 244 929 |
| 48 | Quick-release connector - \varnothing 1/8"- \varnothing 6 mm | 234 842 |
| 50 | Solenoid valve | 243 655 |
| | Solenoid valve coil 220 VAC (for item 50) | 243 663 |
| 51 | Adapter 3/8"-1/2" | 244 317 |

* Indicate length required

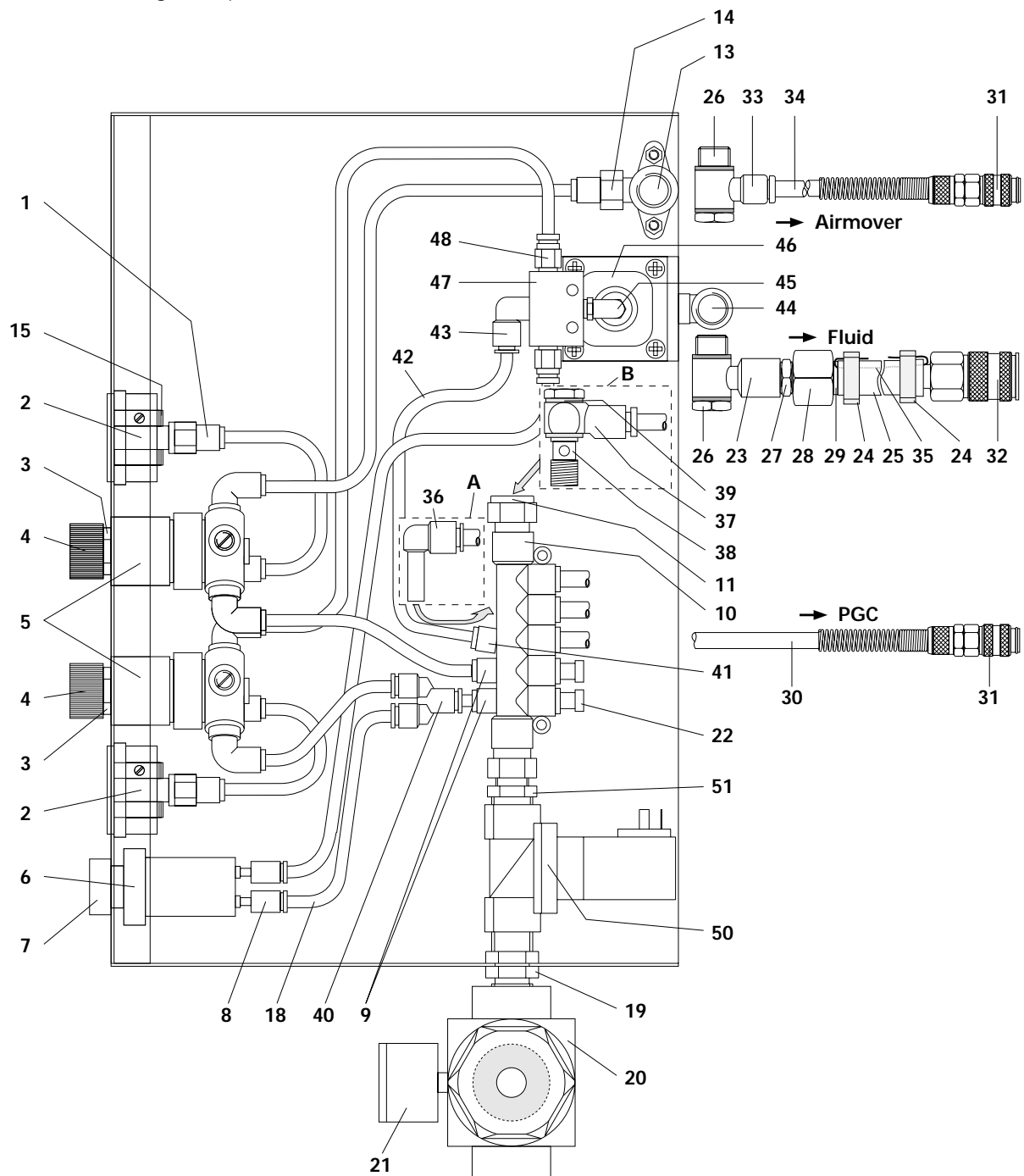


Figure 4

Documentation ADU 1

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