Operating Instructions and Spare Parts List

PTC 1 Powder Transfer Control

[Diagram of PTC 1 Powder Transfer Control]
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## Operating Instructions

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**PTC 1 Powder Transfer Control**

**1. Description**

The PTC 1 Powder Transfer Control, in conjunction with the PTS Powder Transfer System, makes a constant, and efficient powder supply for Gema-Volstatic powder coating booths possible. So that the powder, used in the automatic powder coating process, can be transported efficient PP 1 powder pumps are used at the so-called suction points (on the powder collection hopper of the Multicyclone, the fluidizing channel of the booth, and the FPS Fresh Powder System). The conveying air for the powder pumps is supplied through the PTC 1. The maximum transport power (approx. 2 bar) for all suction points is set with the feed setting knob (1 - Figure 1 below) and indicated on the feed pressure gauge (2) on the front panel of the PTC 1. The setting knob (3) regulates the "No-load" pressure (approx. 1 bar) on suction point 1 only (See Multicyclone - Figure 2). The "No-load" pressure ensures that, when no powder is transported to the suction point by the powder pumps, no external air is pumped, which can lead to a deterioration in the quality of powder separation factor of the Multicyclone.

The powder pumps are automatically switched on and off, individually, when the powder in the powder container of the PTS falls below a certain level.

Front view of the PTC 1 Powder Transfer Control

![PTC 1 Powder Transfer Control](image)

1. Feed setting knob. 3. "No-load" setting knob.
2. Feed pressure gauge. 4. "No-load" pressure gauge.

**Figure 1.**

**2. Technical Data:**

**Pneumatic Data:**
- Compressed air input : 7-10 bar.
- Compressed air consumption : Dependent on the number of powder pumps connected.
- Max. water content : 1.3 g/m³.
- Max. oil content : 0.1 ppm.
Powder Transfer System

When the booth is started up the pneumatic input (Y3, see Pneumatic diagram, page 4) and the sieve are also switched on. The powder pump at Suction point 1 begins to pump in "no-load operation". Suction points 2 and 3 (Figure 2) are not switched on. If the powder level probe in the powder container of the electrostatic equipment indicates that powder is required the pneumatic system of Suction point 1 (Figure 2) is switched to full power powder delivery. The minimum level in the powder container must now be exceeded for a certain time - set on the corresponding relay in the booth control unit (ICS or similar). If this does not happen Suction point 1 runs in "no-load operation" once again and Suction point 2 (Figure 2) switches to full power powder delivery. After the time set on the corresponding relay in the booth control unit (ICS or similar) has expired Suction point 2 (Figure 2) also switches off and Suction point 3 (Figure 2) is switched to full power powder delivery, if the minimum powder level is not exceeded in the meantime. If the minimum powder level is not achieved within the time set on the corresponding relay in the booth control unit (ICS or similar) then a powder shortage is indicated on the booth control panel and the locking contact is closed (Potential free).

1. Powder pump on powder collector of the Multicyclone.
2. Powder pump on fluidizing channel in the powder booth (Optional).
3. Powder pump on the FPS Fresh Powder System (Optional)

Figure 2.
PTC 1 Rear view (Hose connections)

1. Outlet to Suction point 1 - Multicyclone.
2. Outlet to Suction point 2 (Optional - Booth Fluidizing channel).
3. Outlet to Suction point 3 (Optional - FPS Fresh Powder System).
4. Compressed air input

Figure 3.
Figure 4.

PTC 1 Pneumatic diagram

Main valve

Main compressed air input

No-load operation

Transfer operation

Suction point 1

Suction point 2

Suction point 3

Y3

Y4

Y5

Y6
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 PTC 1, Serial no: 8001 1496
2. Order no: 201 618, 5 pieces, fuse - 1.25 AT

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 hoses are given as external and internal diameters:

e.g. ø 8 / 6 mm = 8 mm outside diameter (o/d) / 6 mm inside diameter (l/d).
### PTC 1 Powder Transfer Control

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Code</th>
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<tbody>
<tr>
<td>3</td>
<td>Pressure reducing valve</td>
<td>241 369</td>
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<tr>
<td>4</td>
<td>Locking nut</td>
<td>302 163</td>
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<tr>
<td>5</td>
<td>Regulator knob</td>
<td>200 069</td>
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<td>6</td>
<td>Pressure gauge</td>
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<td>7</td>
<td>Pressure gauge holder plate</td>
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<td>10</td>
<td>Pressure reducing valve</td>
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<td>11</td>
<td>Servo valve (Y3)</td>
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<tr>
<td>12</td>
<td>Servo valve (Y4)</td>
<td>242 233</td>
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<td>External air outlet - 3/8&quot; B.S.P.</td>
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<td>External air input - 3/8&quot; B.S.P.</td>
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<td>Double nipple valve</td>
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<td>Tee joint</td>
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<td>Plastic tube connector</td>
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<td>Air connection adapter</td>
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<td>Air connection ring</td>
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<td>Gasket ø 17 x 21 x 1.5 mm</td>
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<td>Adapter - ø 10 mm / ø 6 mm</td>
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<td>Quick release tube connector</td>
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<td>Plug</td>
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<td>30</td>
<td>Lead-through joint</td>
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<tr>
<td>41</td>
<td>Plastic hose (Black) ø 10 / ø 8 mm</td>
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PTC 1 Powder Transfer Control

Figure 5