

# **Powder Pump PFJ-R**

Manual P/N 768 644 A  
– English –



NORDSON (UK) LIMITED • STOCKPORT • UK



**Order number**

P/N = Order number for Nordson products

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# Declaration of Conformity

## 98/37/EC

## 73/23/EEC

We,

**Nordson (U.K.) Limited**

of

**Ashurst Drive, Cheadle Heath, Stockport, Cheshire, SK3 0RY,  
United Kingdom**

declare that under our sole responsibility for supply/manufacture of the product(s)

**Product Name** Powder Pump PFJ-R

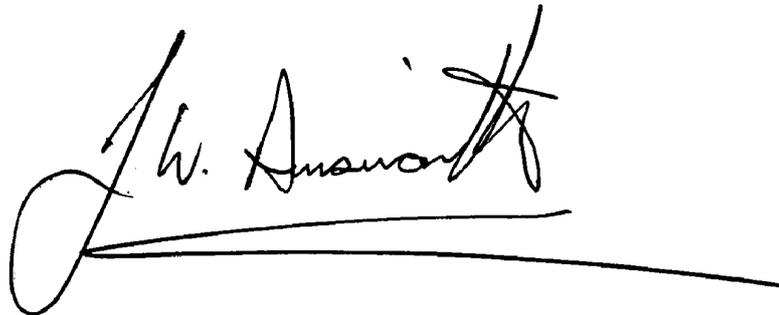
**Model Number(s)** N/A

**Product Options** All

to which this declaration relates, is in conformity with the following standards and other normative documents

**Safety** BS EN 292:1991  
"Safety of machinery – Basic concepts, general principles for design"

following the provisions of 98/37/EC and 73/23/EEC Directives

A handwritten signature in black ink, appearing to read 'J. W. Ainsworth', with a long horizontal flourish extending to the right.

Jim Ainsworth  
Engineering Director

Nordson (U.K.) Ltd., 1st January 2002

NB ref EN45014 (BS7514)



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Czech Republic		4205-4722 1955	4205-4722 1977
France		33-1-6412 1400	33-1-6412 1401
Denmark		45-43-661 133	45-43-661 123
Germany	<i>Erkrath</i>	49-211-92050	49-211-254 658
	<i>Lüneburg</i>	49-4131-8940	49-4131-894 149
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	<i>Finishing</i>	44-161-495 4200	44-161-428 6716
	<i>Nordson U.V.</i>	44-1753-528 151	44-1753-691 351

## Distributors in Eastern & Southern Europe

Contact: FDE, Nordson UK	44-161-495 4200	44-161-428 6716
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**Outside Europe /  
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- For your nearest Nordson office outside Europe, contact the Nordson offices below for detailed information.
- Pour toutes informations sur représentations de Nordson dans votre pays, veuillez contacter l'un de bureaux ci-dessous.
- Para obtener la dirección de la oficina correspondiente, por favor diríjase a unas de las oficinas principales que siguen abajo.

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# Safety



**WARNING:** Observe and follow all safety instructions, the general safety instructions included as a separate document, as well as the specific safety instructions in all other related documentation.

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## 1. Introduction

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Read and follow these safety instructions. Task and equipment specific warnings, cautions, and instructions are included in equipment documentation where appropriate.

Make sure all equipment documentation, including these instructions, is accessible to all persons operating or servicing equipment.

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## 2. Qualified Personnel

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Equipment owners are responsible for making sure that Nordson equipment is installed, operated, and serviced by qualified personnel. Qualified personnel are those employees or contractors who are trained to safely perform their assigned tasks. They are familiar with all relevant safety rules and regulations and are physically capable of performing their assigned tasks.

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## 3. Intended Use

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Use of Nordson equipment in ways other than those described in the documentation supplied with the equipment may result in injury to persons or damage to property.

Some examples of unintended use of equipment include

- using incompatible materials
- making unauthorized modifications
- removing or bypassing safety guards or interlocks
- using incompatible or damaged parts
- using unapproved auxiliary equipment
- operating equipment in excess of maximum ratings

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## 4. Regulations and Approvals

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Make sure all equipment is rated and approved for the environment in which it is used. Any approvals obtained for Nordson equipment will be voided if instructions for installation, operation, and service are not followed.

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## 5. Personal Safety

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To prevent injury follow these instructions.

- Do not operate or service equipment unless you are qualified.
- Do not operate equipment unless safety guards, doors, or covers are intact and automatic interlocks are operating properly. Do not bypass or disarm any safety devices.
- Keep clear of moving equipment. Before adjusting or servicing any moving equipment, shut off the power supply and wait until the equipment comes to a complete stop. Lock out power and secure the equipment to prevent unexpected movement.
- Relieve (bleed off) hydraulic and pneumatic pressure before adjusting or servicing pressurized systems or components. Disconnect, lock out, and tag switches before servicing electrical equipment.
- While operating manual electrostatic spray guns, make sure you are grounded. Wear electrically conductive gloves or a grounding strap connected to the gun handle or other true earth ground. Do not wear or carry metallic objects such as jewelry or tools.
- If you receive even a slight electrical shock, shut down all electrical or electrostatic equipment immediately. Do not restart the equipment until the problem has been identified and corrected.
- Obtain and read Material Safety Data Sheets (MSDS) for all materials used. Follow the manufacturer's instructions for safe handling and use of materials, and use recommended personal protection devices.
- To prevent injury, be aware of less-obvious dangers in the workplace that often cannot be completely eliminated, such as hot surfaces, sharp edges, energized electrical circuits, and moving parts that cannot be enclosed or otherwise guarded for practical reasons.

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## 6. Fire Safety

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To avoid a fire or explosion, follow these instructions.

- Ground all conductive equipment in the spray area. Check equipment and workpiece grounding devices regularly. Resistance to ground must not exceed one mega-ohm.
- Shut down all equipment immediately if you notice static sparking or arcing. Do not restart the equipment until the cause has been identified and corrected.
- Do not smoke, weld, grind, or use open flames where flammable materials are being used or stored.
- Provide adequate ventilation to prevent dangerous concentrations of volatile materials or vapors. Refer to local codes or your material MSDS for guidance.
- Do not disconnect live electrical circuits while working with flammable materials. Shut off power at a disconnect switch first to prevent sparking.
- Know where emergency stop buttons, shutoff valves, and fire extinguishers are located. If a fire starts in a spray booth, immediately shut off the spray system and exhaust fans.
- Shut off electrostatic power and ground the charging system before adjusting, cleaning, or repairing electrostatic equipment.
- Clean, maintain, test, and repair equipment according to the instructions in your equipment documentation.
- Use only replacement parts that are designed for use with original equipment. Contact your Nordson representative for parts information and advice.

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**7. Action in the Event of a Malfunction**

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If a system or any equipment in a system malfunctions, shut off the system immediately and perform the following steps:

- Disconnect and lock out electrical power. Close pneumatic shutoff valves and relieve pressures.
- Identify the reason for the malfunction and correct it before restarting the equipment.

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**8. Disposal**

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Dispose of equipment and materials used in operation and servicing according to local codes.

# Description

## 1. Intended Use

The Powder Pump PFJ-R delivers powder from the feed container to the spray guns in a smooth and controlled manner.

## 2. Function

The feeding air (1) generates a vacuum in the pump (Venturi effect), which sucks the fluidized powder (3). The dosage air (2) reduces the vacuum (powder quantity), at the same time, the air quantity is required for feeding will be maintained.

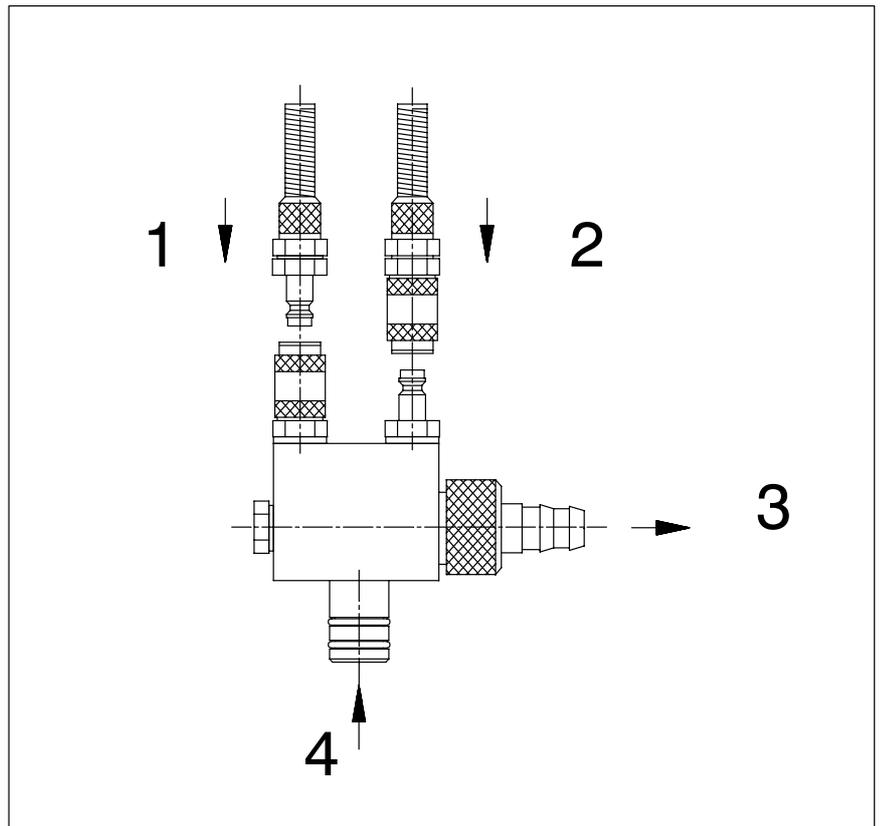


Fig. 1

1. Feed Rate air  
2. Atomising air

3. Powder feed  
4. Suction air

# Troubleshooting

## 1. Important Hints for Troubleshooting

It must be noted that a fault can occur for several reasons. It is advisable to check all possible causes for a given fault. Obvious causes of malfunction such as broken wires, missing fasteners etc., should be noted during visual inspections and corrected immediately.

The Unit does not contain any user serviceable parts, any parts that fail must be replaced by approved parts available from Nordson.

## 2. Troubleshooting Procedures

Problem	Possible Cause	Corrective Action
Insufficient powder output	Nozzle worn out	Replace nozzle
	Driving nozzle worn out	Replace driving nozzle
	O-ring deffective	Replace O-ring
	Unsufficient fluidization	Adjust fluidization air
	Suction tube plugged	Clean suction tube
	Sintered powder in venturi	Clean injector
	malfunction at feeding and/or dosage air	Eliminate cause
Pulsing powder output	Too little dosage air	Increase dosage air
	Powder tube does not match to installation	Change tube type
	Insufficient fluidization	Adjust fluidization

# Parts

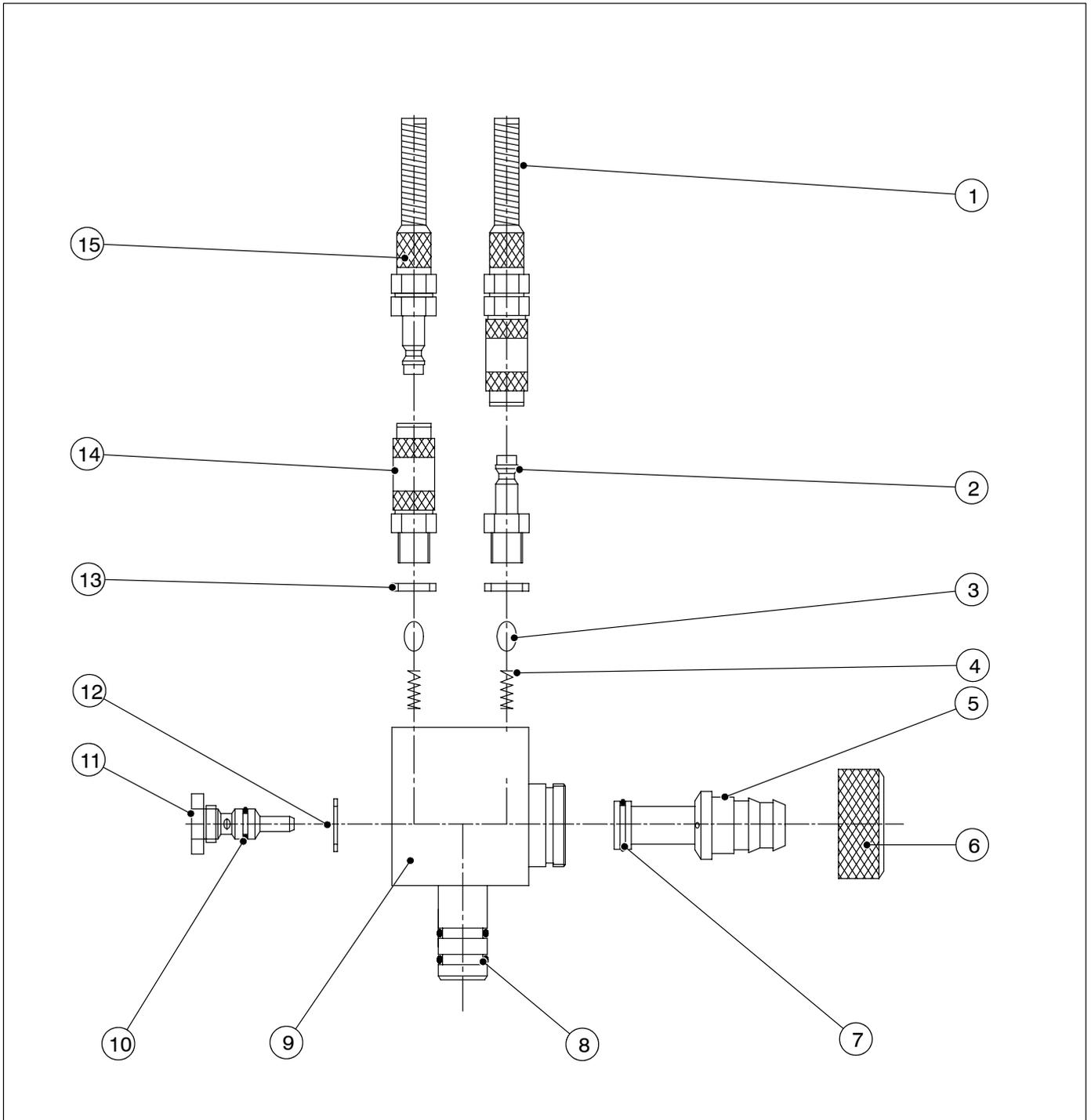


Fig. 2 Powder Pump PFJ-R Parts Illustrated

Item	Part No	Description	Quantity	Note
-	393 472	Powder PumpPFJ-R	-	
1	393 435	• Outlet with antikink protection (9200128)	1	
2	393 432	• Srewed connector (9200130)	1	
3	393 416	• Ball (9400901)	2	
4	393 424	• Spring (9300601)	2	
5	393 461	• Venturi throat (2200100)	1	
6	393 423	• Union cut (2200113)	1	
7	393 436	• O-ring 8.0 x 1.5 (9400200)	1	
8	393 437	• O-ring 16 x 2 (9400205)	2	
9	393 440	• Venturi housing (2200105)	1	
10	393 470	• O-ring 5.1 x 1.6 (9400203)	1	
11	393 463	• Venturi nozzle (2200104)	1	
12	393 438	• Gasket 1/8" (9400298)	1	
13	393 431	• Gasket (9400299)	2	
14	393 433	• Screwed case (9200131)	1	
15	393 434	• Connector with anti-kink protection (9200129)	1	

# Specifications

## 1. Technical Data

<b>Length</b>	112 mm
<b>Width</b>	30 mm
<b>Height</b>	100 mm
<b>Weight</b>	360 g

## 2. Tube Connection

<b>1</b>	Air tube 6/8mm
<b>2</b>	Air tube 6/8mm
<b>3</b>	Powder tube 11/(17) according to manufacturer

## 3. Performance

<b>Output quantity: 0 - 250 g/min</b>	<p><b>NOTE:</b> The powder output quantity depends on various influences</p> <ul style="list-style-type: none"> <li>• Powder type</li> <li>• Tube material</li> <li>• Tube installation</li> <li>• Tube length</li> <li>• Ambient temperature</li> <li>• Powder gun, etc.</li> </ul>
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