Powder/Micro Feed Centre

Manual P/N 768 640 A
– English –

Keep for Future Reference

NORDSON (UK) LTD. ● STOCKPORT

CE

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

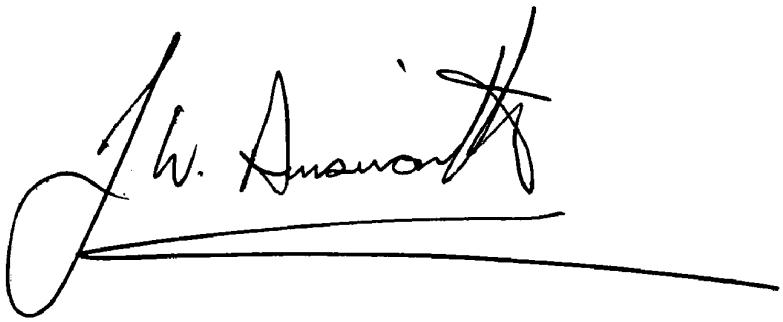
declare that under our sole responsibility for supply/manufacture of the product(s)

Product Name	Powder/Micro Feed Centre
Model Number(s)	768570, 768571,768560
Product Options	All

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

Safety	BS EN 60204–1:1993 “Safety of Machinery – Electrical equipment of machines” EN 60335:Part 1:1988 “Safety of household and similar electrical appliances” 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



Jim Ainsworth
General Manager

Nordson (U.K.) Ltd., 8th January 2001

NB ref EN45014 (BS7514)

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Congratulations on the Purchase of Your Nordson Product

Nordson equipment is engineered and manufactured in accordance with strict specifications, using high quality components and state–of–the–art technologies that assure reliable, long–term performance. Your product was thoroughly tested for proper operation prior to shipment.

Before unpacking and installing your new equipment, please read this manual. It is your guide to safe installation, productive operation and effective maintenance. We recommend that you keep the manual available for future reference.

Your Safety is Important to Nordson

Carefully read the *Safety* section. Your product is designed for safe operation when used according to the published instructions. Potential hazards exist when operating instructions are not followed.

Manufacturer of Equipment

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For a list of local Nordson organisations, see *Nordson International*.

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Nordson International

Europe

Country		Phone	Fax
Austria		43-1-707 5521	43-1-707 5517
Belgium		31-13-511 8700	31-13-511 3995
Czech Republic		4205-4159 2411	4205-4124 4971
Denmark	*Hot Melt*	45-43-66 0123	45-43-64 1101
	Finishing	45-43-66 1133	45-43-66 1123
Finland		358-9-530 8080	358-9-530 80850
France		33-1-6412 1400	33-1-6412 1401
Germany	*Erkrath*	49-211-92050	49-211-254 658
	Lüneburg	49-4131-8940	49-4131-894 149
	Düsseldorf - Nordson UV	49-211-3613 169	49-211-3613 527
Italy		39-02-904 691	39-02-9078 2485
Netherlands		31-13-511 8700	31-13-511 3995
Norway	*Hot Melt*	47-23 03 6160	47-22 68 3636
	Finishing	47-22-65 6100	47-22-65 8858
Poland		48-22-836 4495	48-22-836 7042
Portugal		351-22-961 9400	351-22-961 9409
Russia		7-812-11 86 263	7-812-11 86 263
Slovak Republic		4205-4159 2411	4205-4124 4971
Spain		34-96-313 2090	34-96-313 2244
Sweden	*Hot Melt*	46-40-680 1700	46-40-932 882
	Finishing	46 (0) 303 66950	46 (0) 303 66959
Switzerland		41-61-411 3838	41-61-411 3818
United Kingdom	*Hot Melt*	44-1844-26 4500	44-1844-21 5358
	Finishing	44-161-495 4200	44-161-428 6716
	Nordson UV	44-1753-558 000	44-1753-558 100

Distributors in Eastern & Southern Europe

DED, Germany	49-211-92050	49-211-254 658

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- Para obtener la dirección de la oficina correspondiente, por favor diríjase a unas de las oficinas principales que siguen abajo.

Contact Nordson		Phone	Fax
Africa / Middle East			
DED, Germany		49-211-92050	49-211-254 658
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Canada		1-905-475 6730	1-905-475 8821
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	Finishing	1-440-988 9411	1-440-985 1417
	Nordson UV	1-440-985 4592	1-440-985 4593

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Section 1

Safety

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Section 1
Safety

1. Introduction

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.

2. Qualified Personnel

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.

3. Intended Use

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

4. Regulations and Approvals

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

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

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

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.

8. Disposal

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

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Section 2

Description

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Section 2
Description

1. Intended Use

The Powderfeed and Microfeed Centres are used as a collector for recycled powder, containment and powder feed direct from a powder box to the automatic or manual spray guns.

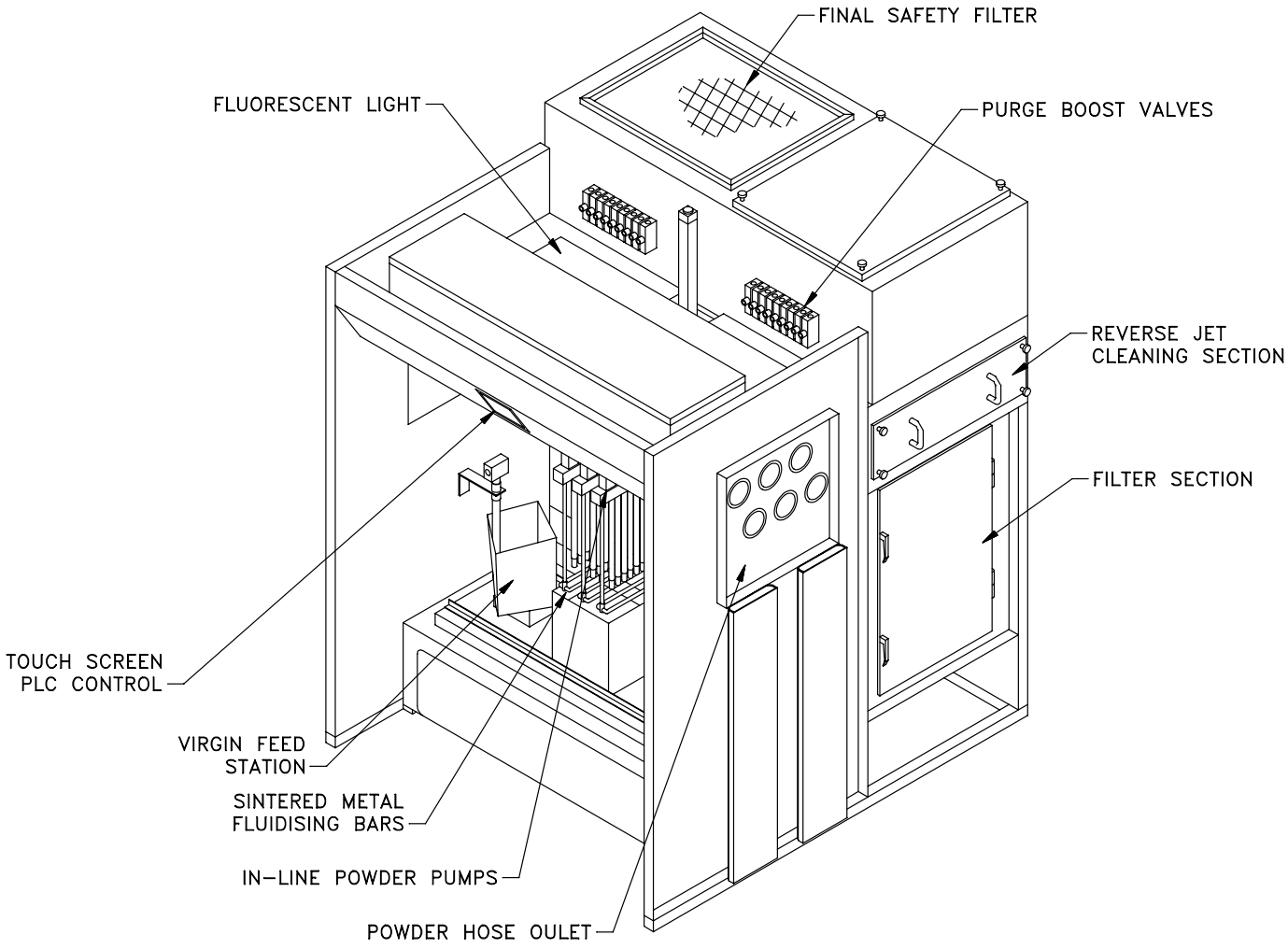

Fig. 2-1 Typical I Powderfeed Centre

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1. Intended Use
(contd.)

They can be used as a self contained unit as in the Powderfeed or attached to the main extract system as in the case of a Microfeed.

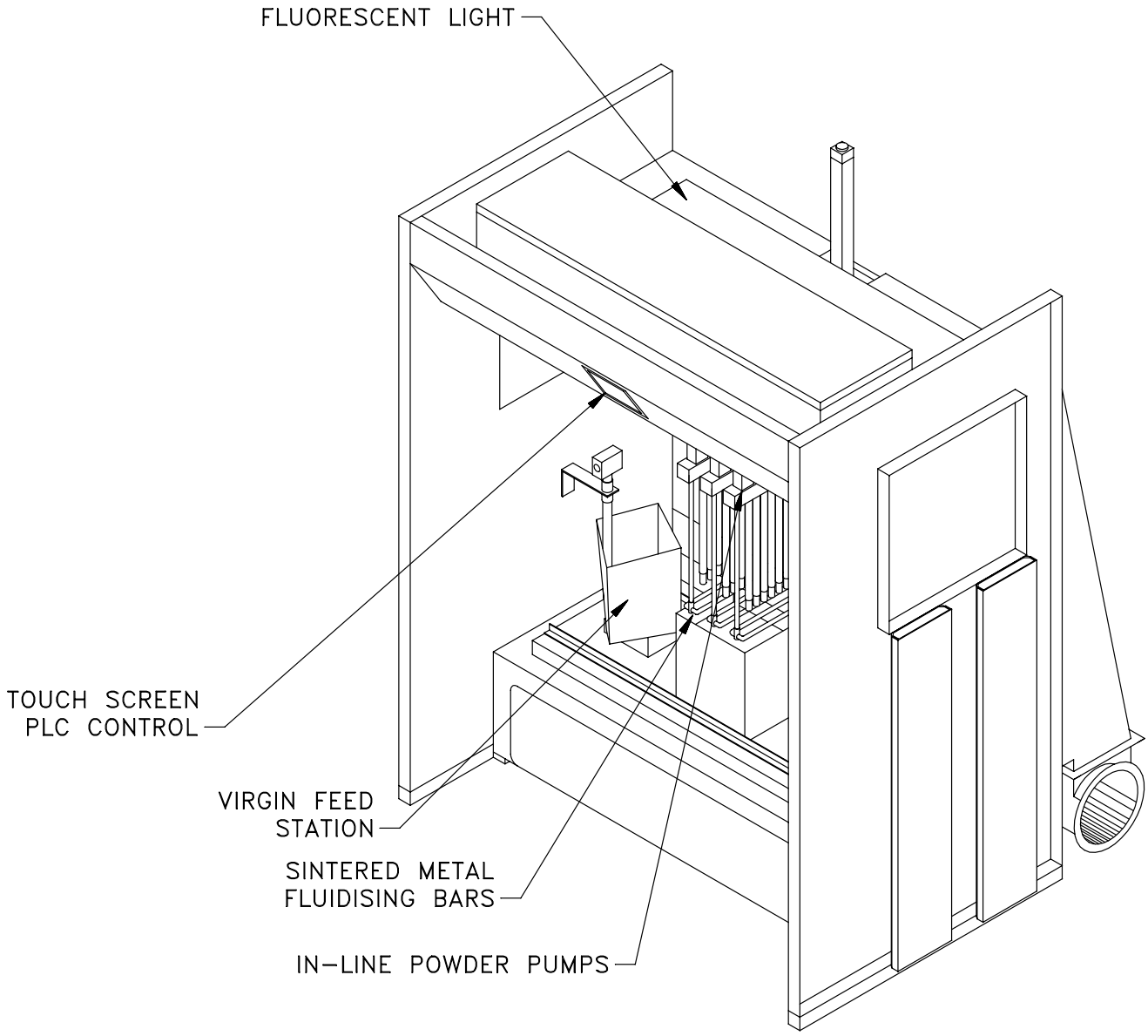

Fig. 2-2 Typical Microfeed Centre

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2. Features

The Powderfeed anf Microfeed Centres minimise colour change time, powder loss and environmental contamination on multi–gun automatic powder system.

The operator places a box of powder on a vibratory table housed in an open face ventilated enclosure. The feed assembly is lowered into the powder to a depth of approximately 50 mm. This is automatically maintained as the powder level falls. For longer runs, powder level may be restored by auto or manual addition. If required, recycled powder can be continuously returned to the original box through a sieve assembly.

To initiate colour change, the operator simply follows the icons on the PLC touch screen; raises the feed assembly clear of the powder box, which can be discarded or resealed and removed. The operator by following a simple set of instructions, can automatically clean both the powder feed system and the recycle system, with very little disassembly of any components

The principle of the system is to dramatically reduce colour change times, through automation.

The system is available in two types. The Powderfeed Centre is a self contained system with its own extraction, were the Microfeed Centre must be linked into the booth extraction. They both can feed up to 27 guns from one box or a dedicated plastic box is available, which will hold up to 50 kg of powder. Light and dark manifolds are also available for speed of colour change together with two sets of hoses.

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Section 3

Installation

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Section 3
Installation

WARNING: Allow only qualified personnel to perform the following tasks. Observe and follow the safety instructions in this document and all other related documentation.

1. Transport

Transport the unit so as to avoid damage. Use suitable packaging materials and sturdy cartons.

Protect the unit from exposure to humidity, dust and vibrations.

2. Unpacking

Carefully unpack the unit to avoid damaging it. Check for damage caused during transport.

Save packing materials for possible later use. Otherwise recycle or dispose of properly according to local regulations.

3. Removing

Switch off the mains supply, then disconnect all electrical connections from the unit.

4. Storage

Pack the unit in suitable packing materials and sturdy cartons. Protect from humidity, dust and large temperature fluctuations (condensation).

5. Disposal

Dispose of properly according to local regulations.

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6. Electrical

WARNING: Allow only qualified personnel to perform electrical connections.

A single supply cable is required to the control panel. The supply should be fed from a suitable disconnect device. Introduce the cable into the panel using an IP6X cable gland. Ensure that all the electrical wires are suitably sized for the fan motor loading and adequate fuse/circuit protection is provided at the source of supply.

NOTE: The fan motor is designed to be switched ”direct–on–line” (refer to the electrical circuit schematic supplied with the unit, for power requirements before installation).

On starting the fan motor (where fitted), check for correct rotation, normally clockwise looking at the motor from the impeller end, (air is pushed out of the exhaust on the fan scroll). Do this by starting and immediately stopping the fan motor. Proper fan rotation is extremely important. With the fan running in the wrong direction, it will deliver approximately 40% of its rated air volume. Correct by reversing any two leads on the load side of the fan motor starter.

7. Pneumatic

Before operating the feed centre, ensure that the air supply has reached a suitable quality and that air has been drawn off the system through the drain leg. This will ensure that any materials left in the line during installation do not enter the feed centre.

WARNING: The regulated air supply to reverse purge manifold has been pre–set to 4 bar (max) and under no circumstances should it be altered without prior consultation with Nordson.

8. Setting Up the Unit

WARNING: Allow only qualified personnel to perform the installation. Observe safety instructions.

Site Preparation

NOTE: Feed centres are generally delivered pre-assembled, where this is not practical due to shipping requirements or at the customers request that feed centre can be supplied ”flat pack” for on-site assembly.

NOTE: Installation of the feed centre should not be undertaken without the presence of a Nordson representative or a suitably qualified person.

- Choose a level site on which to install the Feed Centre, preferably as near to the powder booth as practically possible.

- Seal concrete floors with a suitable material to avoid dust. Other floor surfaces should be of a type that is easy to keep clean.

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Section 4

Operation

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Section 4
Operation

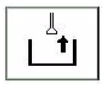
WARNING: Allow only qualified personnel to perform the following tasks. Observe and follow the safety instructions in this document and all other related documentation.

1. Daily Operation

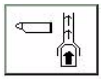
Procedure for Cleaning Booth and Application equipment with Micro/Powder Feed Centre.

In order to successfully Colour change the Booth and Application system follow the procedure outlined below.

Pre–Clean Down Procedure

- Move the Lance assembly up  up and out of the box with the guns still spraying. (Where an autogun purge system is fitted, this is not required).
- Close the booth doors and move the powder box away from the lance assembly and under the sieve.
- Remove the guns out of the booth till the tip of the gun is level with the inside of the booth.
- Turn off the application equipment.

Clean Down Procedure: Pumps and Guns

- Manually clean down the lance assembly with a blowgun.
- Activating “Pump Purge”.  will automatically lower the lance arm and start the purge sequence.
- After the lance assembly has been purged, manually clean the outside of the guns with a blowgun.
- Clean down all remaining powder inside of the booth.
- Wait for the completion of the reclaimed powder to return through the sieve.

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Daily Operation
(contd.)

Clean Down Procedure: Recycle System

- Open the cyclone inspection doors and unclamp the surge hopper from the twin cyclone (where applicable) so that there is a gap between the cyclone and the hopper.
- Remove the recycle hose from the sieve assembly and locate in the cyclone purge block, twist the nozzle through 90 degrees to lock into position, activate Cyclone Purge. 
- Manually clean down the cyclone surge hopper with the blowgun.
- Remove the powder box from the Feed Centre and store.
- Clean the sieve assembly and the mini–cyclone (where applicable) with the blowgun and vacuum.
- The lance arm will now move automatically to it's up position.
- Finally manually clean down the lance assembly with the blowgun.
- Connect the recycle hose to the rear of the Feed Centre.
- Refit the surge hopper to the twin cyclone
- Place a new powder box in position and move the lance assembly down  into the powder box.
- The system is now ready for operation with new powder.
- After approximately two minutes, re–connect the recycle hose to the sieve assembly.

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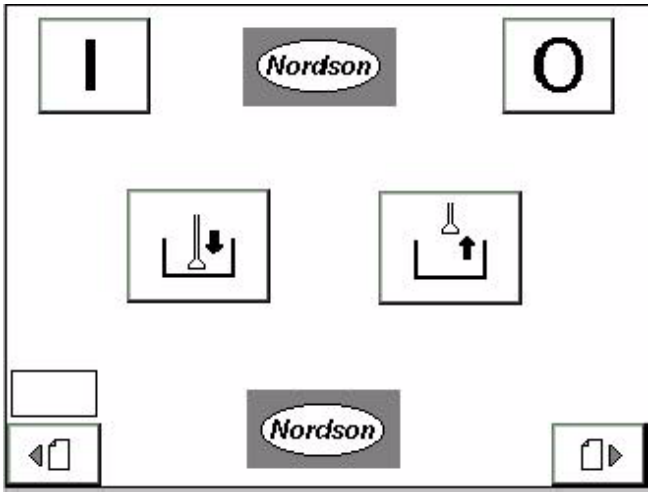
2. Screen Icon Identification

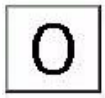
Listed below is all the touch screen icon identification and operation procedures.

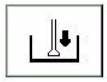
Initial Start up Screen

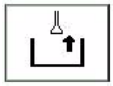
The screen illustrated below is the initial screen, when the feed centre is powered up.



Press this icon  to power up the Feed Centre.

Press this icon  to power down the Feed Centre.

Press this icon  to move the lance arm down.

Press this icon  to move the lance arm up.

Press this icon  totake you to the Nordson configuration screens. This is password protected and only can be accessed by a qualified Nordson Representative.

Press this icon  to take you to the Purge/Recycle set up screen

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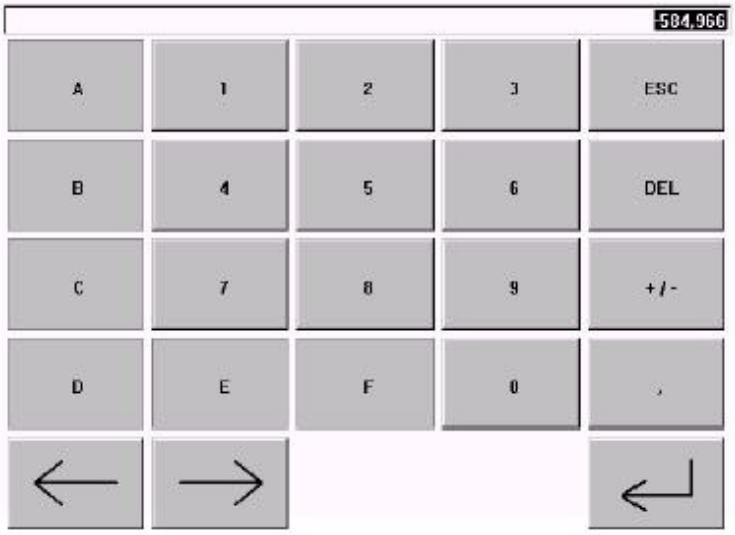
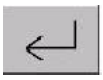
Data Entry Screen

Pressing this “=00” or empty box on any screen will take you to the screen illustrated below. This allows you to enter any numerical values you may require.



Upon completion of any data entry , press this  key

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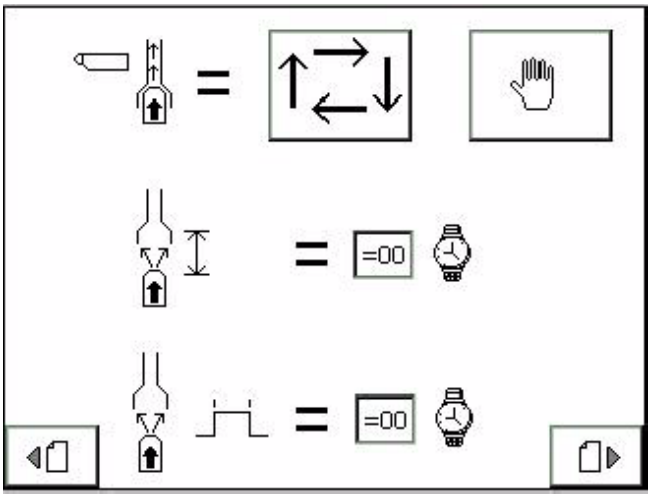
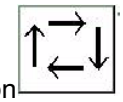
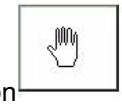
System Configuration Screens

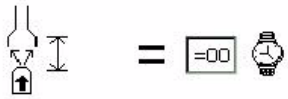
WARNING: Allow only qualified personnel to perform the following tasks. Observe and follow the safety instructions in this document and all other related documentation.

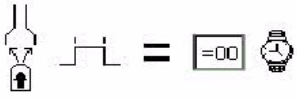
Press the  icon on the start up screen, will allow you to access the system configuration pages. These are password protected and can only be accessed by pressing the empty box above the icon and entering the correct password in the data entry screen. Upon entering the correct password, pressing the page icon again will gain you access to the first screen below.



This icon  is for the automatic pump purge. If a 2nd axis movers are installed, this will allow the feed centre to interface with the main booth system

This icon  is for manaul pump purge. The pump purge is required to be operated manually through the appropriate screens

Pressing the  “=00” box allows you to enter the delay time in 100 millisecond units before the purge manifold pulses to clean the outside of the lance

Pressing the  ”=00” box allows you to enter the lance clean pulse width in 100 millisecond units

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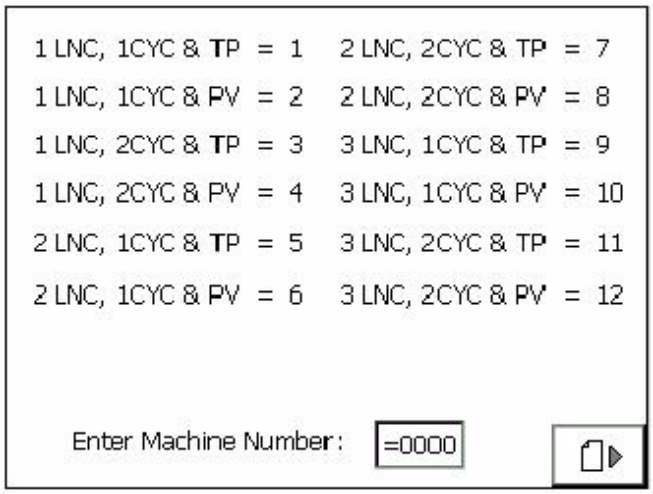
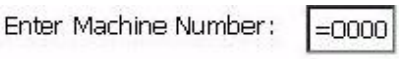
System Configuration Screens
(contd.)

Pressing this icon  takes you back to the start up screen.

Pressing this icon  takes you to the next configuration screen illustrated below.





Pressing the "=0000" box will take you to the data entry screen, there you can enter the number, which corresponds to the machine you have installed.

LNC = Number of Lances

CYC = Number of Cyclones

TP = Transfer Pump Recycle

PV = Pinch Valve Recycle

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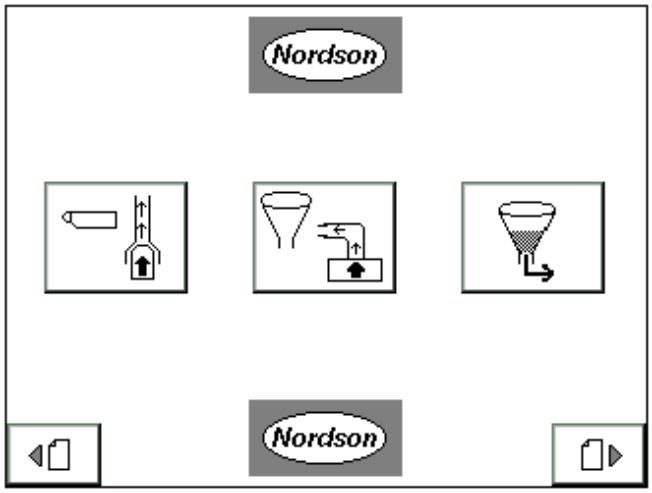
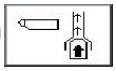
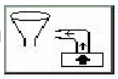
Setting Up and Operation of Purge and Recycle Sequences

Illustration below shows the Initial Purge/Recycle Set Up Screen. This is accessed by pressing this icon  on the start up screen.



Press this icon  to take you to the pump purge set up screen

Press this icon  to take you to the cyclone purge set up screen

Press this icon  to take you to the pinch valve set up screen

Press this icon  to take you back to the the initial start up screen.

Press this icon  to take you to cartridge pulsing, hopper empty and virgin feed initial screen.

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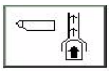
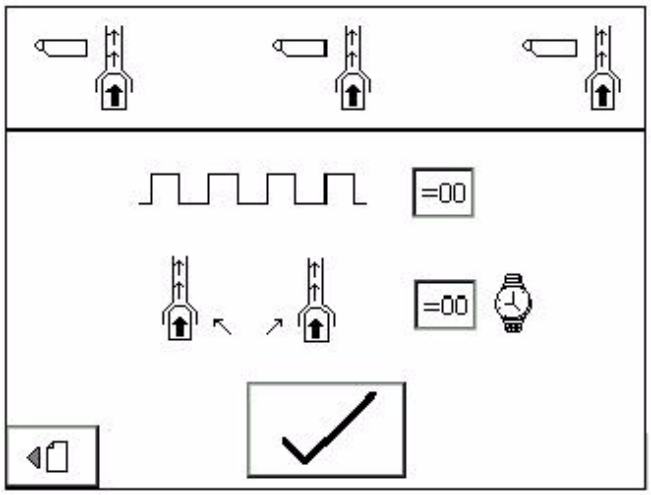
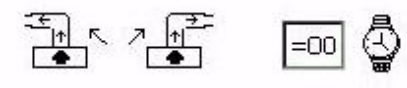
Pump Purge Set Up and Operation Screen

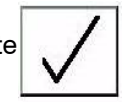
Pressing this icon  on the Initial Purge/Recycle Screen takes you to the pump purge set up screen



Pressing the “=00” box takes you to the data entry screen, which allows you to set how many pump purges are required.



Pressing the “=00” box, takes you to the data entry screen, which allows you to set the delay time between purges in seconds. The watch indicates a unit of time input is required.

When Complete  to action the purge.

Pressing this icon  takes you back to the previous screen

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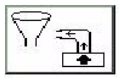
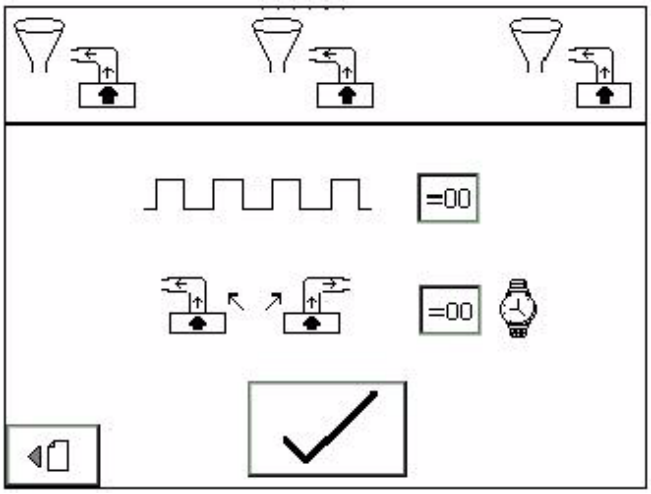
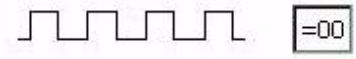
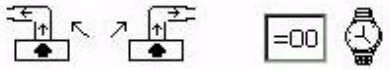
Cyclone Purge Set Up Screen

Pressing this icon  on the Initial Purge/Recycle Screen takes you to the cyclone purge set up screen





Pressing on the “=00” box takes you to the data entry screen, which allows you to set how many pump purges are required.



Pressing the “=00” box, takes you to the data entry screen, which allows you to set the delay time between purges in seconds.

When Complete  to action the purge.

Pressing this icon  takes you back to the previous screen

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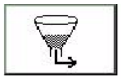
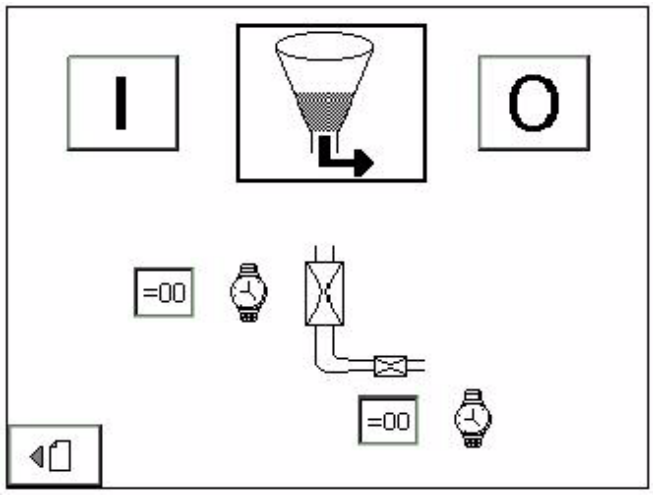
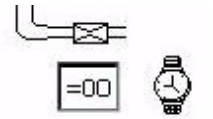
Pinch Valve Recycle Set up Screen

Pressing this icon  on the Initial Purge/Recycle Screen takes you to the pinch valve recycle set up screen

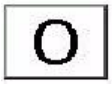


Pressing the “=00” box will take you to the data entry screen, which allow you to set the top pinch valve opening time. This should be set between 10–30 (x100 milliseconds).



Pressing the “=00” box will take you to the data entry screen, which allow you to set the push air time. This should not be set less than 35 (x100mS).

Pressing this icon  will run the recycle system.

Pressing this icon  will stop the recycle system.

Pressing this icon  takes you back to the previous screen

NOTE: The recycle defaults to run, each time the feed centre is started.

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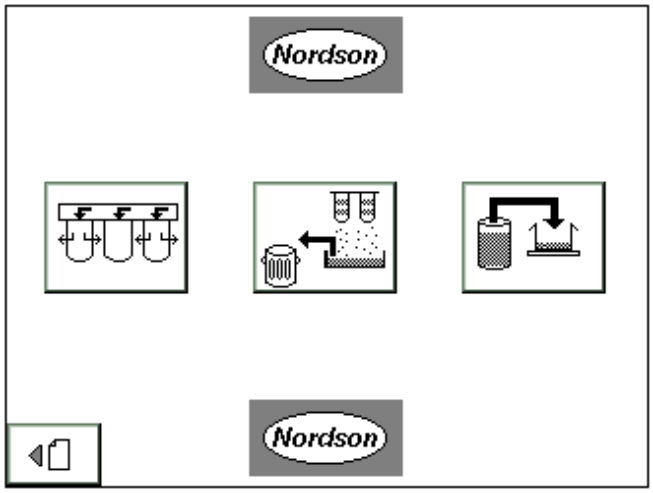
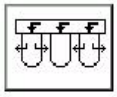
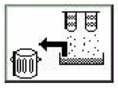
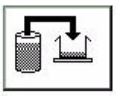
Cartridge Pulsing, Hopper Empty and Virgin Feed Initial Screen

The illustration below shows the Initial Screen to control cartridge pulsing, hopper empty and virgin feed. This is accessed by pressing this icon  on the Purge/Recycle Set Up Screen.



Press this icon  to take you to the Cartridge purge set up screen.

Press this icon  to take you to the Empty Waste Hopper Screen. This is only accessible when a fluid hopper is fitted to the rear of the Feed Centre.

Press this icon  to take you to the Virgin Feed Screen. This is only accessible when virgin feed is fitted.

Press this icon  to take you back to the Purge/Recycle Initial set up screen.

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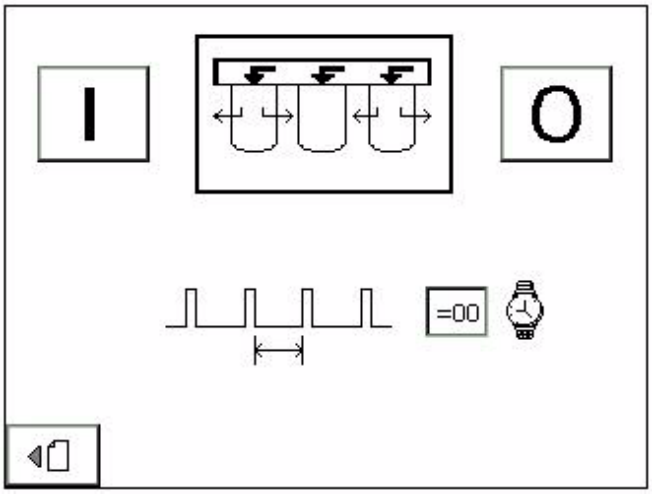
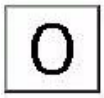
Cartridge Pulse Cleaning Operation and Set Up Screen

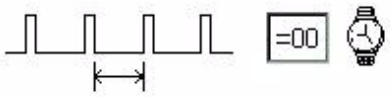
Illustration below shows the cartridge pulse cleaning operation and set up screen (where applicable). This is accessed by pressing  as illustrated on page 4–11.



Press this icon  to power up the cartridge cleaning sequence.

NOTE: Cartridge cleaning sequence defaults ON, each time the feed centre is started.

Press this icon  to power down the cartridge cleaning sequence.



Pressing the “=00” allows you to set the cartridge pulse sequence delay in seconds. it must not be set lower than 15.

Pressing this icon  takes you back to the previous screen

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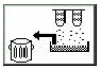
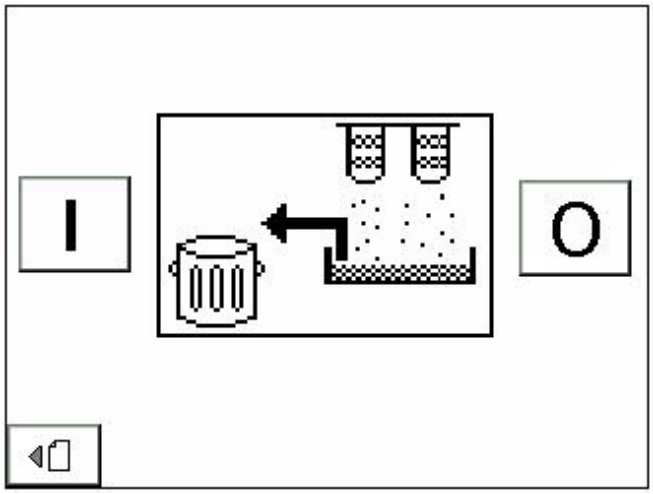
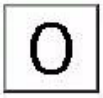
Hopper Empty Operation Screen

Illustration below shows the hopper empty operation screen. This is accessed by pressing  as illustrated on page 4–11.

NOTE: This only applies to feed centres fitted with a fluid bed hopper



Press this icon  to switch on the transfer pump and fluid bed, which empties the rear waste hopper, when fitted.

Press this icon  to switch off the transfer pump and fluid bed.

Press this icon  to take you back to the previous screen

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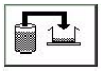
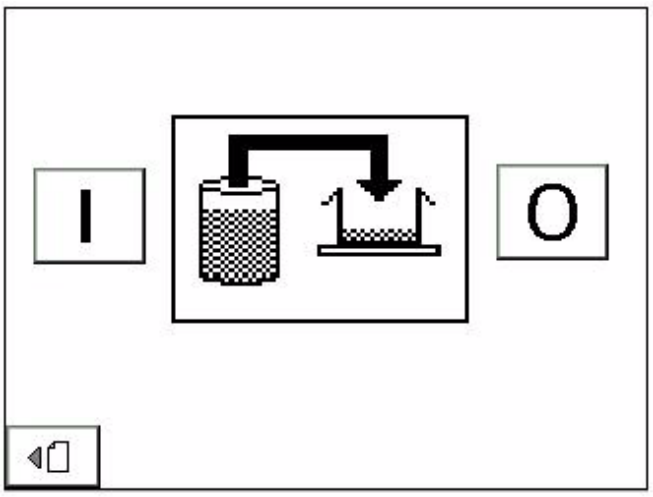
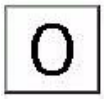
Virgin Feed Operation Screen

Illustration below shows the virgin feed operation screen. (where applicable). This is accessed by pressing this icon  as illustrated on page 4–11.



Press this icon  to switch on virgin feed transfer system where fitted.

Press this icon  to switch off the virgin feed transfer system.

Press this icon  to take you back to the previous screen.

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Section 5

Maintenance

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P/MFC
Issued 12/00

P/N 768640A

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Section 5
Maintenance

WARNING: Allow only qualified personnel to perform the following tasks. Observe and follow the safety instructions in this document and all other related documentation.

WARNING: Breathing in certain airborne dusts (including finishing powders) may be hazardous to health. Ask the powder manufacturer for a Material Safety Data Sheet (MSDS) for information. Use appropriate respiratory protection.

1. Daily Maintenance

NOTE: When maintaining or cleaning the sieve ensure that the screen mesh does not become damaged. If the screen mesh shows signs of damage replace immediately.

- At intervals depending on volume of powder used but not less than once per eight hour shift, inspect the sieve screen for damage, remove any build up of material that does not pass through the sieve by either a vacuum cleaner, or by disassembly of the sieve and cleaning the screen with low pressure compressed air.
- Once every eight–(8)–hour shift, disassemble the sieve and mini–cyclone, clean each item removing any excess powder, wipe with a lint free cloth and then reassemble.
- Inspect seals for damage and replace as necessary.
- Check vent hoses for blockages, clean and refit.
- Check all external cables and hoses for damage, replace or repair as necessary.
- Visually check the complete system for leaks, rectify where necessary.
- Check the operations of the powder transfer systems.

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1. Daily Maintenance (contd.)

- Every four– (4) hours check the collector bin levels (where fitted)– if the bin is above half full, empty it (where applicable).
- Every four– (2) hours or less check the powder box for powder level.
- Every four– (4) hours check the powder pump and gun, clean according to the product manual.

2. Routine Maintenance

Fan Assembly

- Changes in vibration and noise levels are easily identified as an indication to possible problems.
- Current readings taken at regular intervals over the equipment lifetime forms a reliable indicator and record of its condition and performance.
- A fan has inherent vibration; the wiring of ALL connections must be checked for integrity and tightness once a year.

Seals

- Any sign of leakage of powder around a seal means either the seal is not sound or the covers are not properly fastened. Check weekly and any time traces of powder are noticed.

Airflow

- Record the airflow at regular intervals; thus charted, any degradation of system performance will become immediately apparent.

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Cartridges (where applicable)

- Record the airflow at regular intervals; thus charted, any degradation of system performance due to cartridge blocking will become immediately apparent.
- Signs of powder leakage may be due to the cartridge seal leaking. Tighten up the crank after ensuring seal integrity. Replace Cartridge if necessary.
- Cartridges and final filters cannot be manually cleaned they must be replaced.
- On units with final filters, powder leakage may not be noticed, but if adequate records have been kept, the faults will be apparent.

Fluid Beds

- These will be damaged if they are stood on or allowed to become damp. They must be replaced; SMOOTH SIDE UP.

Powder Pumps

- Within the pump is a venturi, which by the very nature of powder will wear. The diminishing efficiency will be noticed by the loss in returned powder. Remove pumps from the collectors. Remove the discharge hose and blow through with a safety compressed air gun. Disassemble the pump and clean all parts with an air gun and a soft clean cloth. Replace worn or damaged parts.
- For further information on servicing powder pumps refer to the appropriate product manual.

Final Filters

- This is an added feature to protect against powder escaping to the immediate area in case of a cartridge leak. They can not be manually cleaned.

Compressed Air

- Open the drop leg. Using a clean white cloth check for water, oil or other contaminates. Correct as necessary.

NOTE: The air drier, if fitted, should remain on at all times to prevent moisture from accumulating in the system components.

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2. Maintenance (contd.)

Electrical Safety

- The unit should be tested for electrical safety, at intervals of not more than 12 months, according to the Electricity at Work regulations 1989 (as revised) or similar for non–UK installations.

3. Cartridge Replacement

Nordson will be pleased to advise on action necessary in case of any mishap, fault or any other enquiry relating to the equipment.

WARNING: Ensure Personal Protective Equipment is worn while carrying out this procedure.

The following steps cover the removal of spent cartridge filters and their replacement with new filters.

WARNING: Ensure that all services are turned off and locked out after cleaning the booth.

WARNING: A powder laden cartridge filter can be heavy. It may be necessary for two persons to be available to remove the cartridge filter.

- Clean the internal walls of the feed centre to avoid unnecessary contact with the powder.
- Relieve all air pressure in the system. This can be done by turning off the air supply and operating the pulsing. Or by releasing the pressure safety valve attached to the air manifold.
- Lock out and disconnect services to the Feed Centre.
- Each cartridge is held in place by a nut. Remove the cartridge by unscrewing the nut. Remove the cartridge through the access doors on the side.

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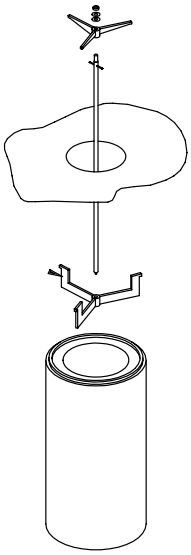
3. Cartridge Replacement
(contd.)

- Each cartridge is held in place by a nut. Remove the cartridge by unscrewing the nut. Remove the cartridge through the access doors on the side.



- Inspect the cartridges for damage. Do not fit damaged cartridges.

NOTE: Do not use any cartridge filters other than those approved by Nordson. The use of the filters not specially designed to Nordson standards could seriously affect the operation and performance of your Feed Centre.

- Ensure before re–fitting cartridges that each cartridge has a rod, centre bracket, holding bracket and nut.

- Replace the cartridge as before. Do not overtighten. The seal should compress by half its thickness.

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Section 6

Troubleshooting

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Section 6
Troubleshooting

WARNING: Allow only qualified personnel to perform the following tasks. Observe and follow the safety instructions in this document and all other related documentation.

1. Important Hints for Troubleshooting

The following tables provide general information for the troubleshooting of basic problems. Sometimes more detailed information, circuit diagrams or measuring devices are also needed 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; approved parts available from Nordson must replace any parts that fail.

2. Table of Troubleshooting

Problem	Possible Cause	Corrective Action
Sieve vibrator fails to run	No input power	Check power supply
		Check cable
	Vibrator capacitor failed (when fitted)	Replace vibrator
	Vibrator failed	Replace vibrator

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Problem	Possible Cause	Corrective Action
Powder builds up on sieve mesh	Mesh not cleaned at frequent enough intervals	Clean mesh at more frequent intervals
	Mesh size too small for powder	Increase mesh size
	Rate of powder supply too high	Reduce rate of powder supply
Powder in box contaminated	Sieve mesh damaged	Replace sieve mesh
	Sieve mesh not thoroughly cleaned before refitting	Ensure mesh is clean and is inserted with same face uppermost
Excessive sieve noise in operation	Lid or base insecure	Check and re–tighten fixings
Powder leaks from lid or base	Seals damaged	Replace seals
	Lid clamps too tight, lid distorted	Reduce tension on clamps and replace lid seal
Fan will not start. (where applicable)	Power Off	Switch on Power
	Overload operated	Re–set overload
	Wiring fault	Repair or replace
	Motor failure	Investigate cause. Replace if necessary
	Contactor fault	Repair or replace. Check push button wiring
Loss of extraction	Damper vibrated shut	Reset and lock
	Cartridges filters not clean	Check cleaning sequence and run for thirty (30) minutes
	Low pulse pressure	Set pressure at 6.4 bar (95p.s.i.)
	Cleaning valve fault	Repair or replace
Powder escaping	Door seals	Tighten star knobs. Check and replace seal if necessary.
	Cartridge leak	Check cartridge mounting seal. Tighten or replace cartridge.
		Check cartridges for punctures. Replace if any pdamage found.
	Powder hose leak	Check, replace or refit hose.
	Powder pump leak	Check all “O” rings. Replace if necessary

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Section 7

Parts

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Section 7
Parts

1. Introduction

To order parts, call the Nordson Customer Service Center or your local Nordson representative. Use this five-column parts list, and the accompanying illustration, to describe and locate parts correctly.

Using the Illustrated Parts List

Numbers in the Item column correspond to numbers that identify parts in illustrations following each parts list. The code NS (not shown) indicates that a listed part is not illustrated. A dash (—) is used when the part number applies to all parts in the illustration.

The six-digit number in the Part column is the Nordson Corporation part number. A series of dashes in this column (- - - - - -) means the part cannot be ordered separately.

The Description column gives the part name, as well as its dimensions and other characteristics when appropriate. Indentions show the relationships between assemblies, subassemblies, and parts.

Item	Part	Description	Quanity	Note
—	000 0000	Assembly	1	
1	000 000	Subassembly	2	A
2	000 000	• • Part	1	

- If you order the assembly, items 1 and 2 will be included.
- If you order item 1, item 2 will be included.
- If you order item 2, you will receive item 2 only.

The number in the Quantity column is the quantity required per unit, assembly, or subassembly. The code AR (As Required) is used if the part number is a bulk item ordered in quantities or if the quantity per assembly depends on the product version or model.

Letters in the Note column refer to notes at the end of each parts list. Notes contain important information about usage and ordering. Special attention should be given to notes.

- On top of the earthing strip fit the seal washer with the rubber face uppermost. Failure to do this will cause the cartridge not to seal and powder will leak past the cartridges.

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2. Micro/Powder Feed Centre Front Elevation

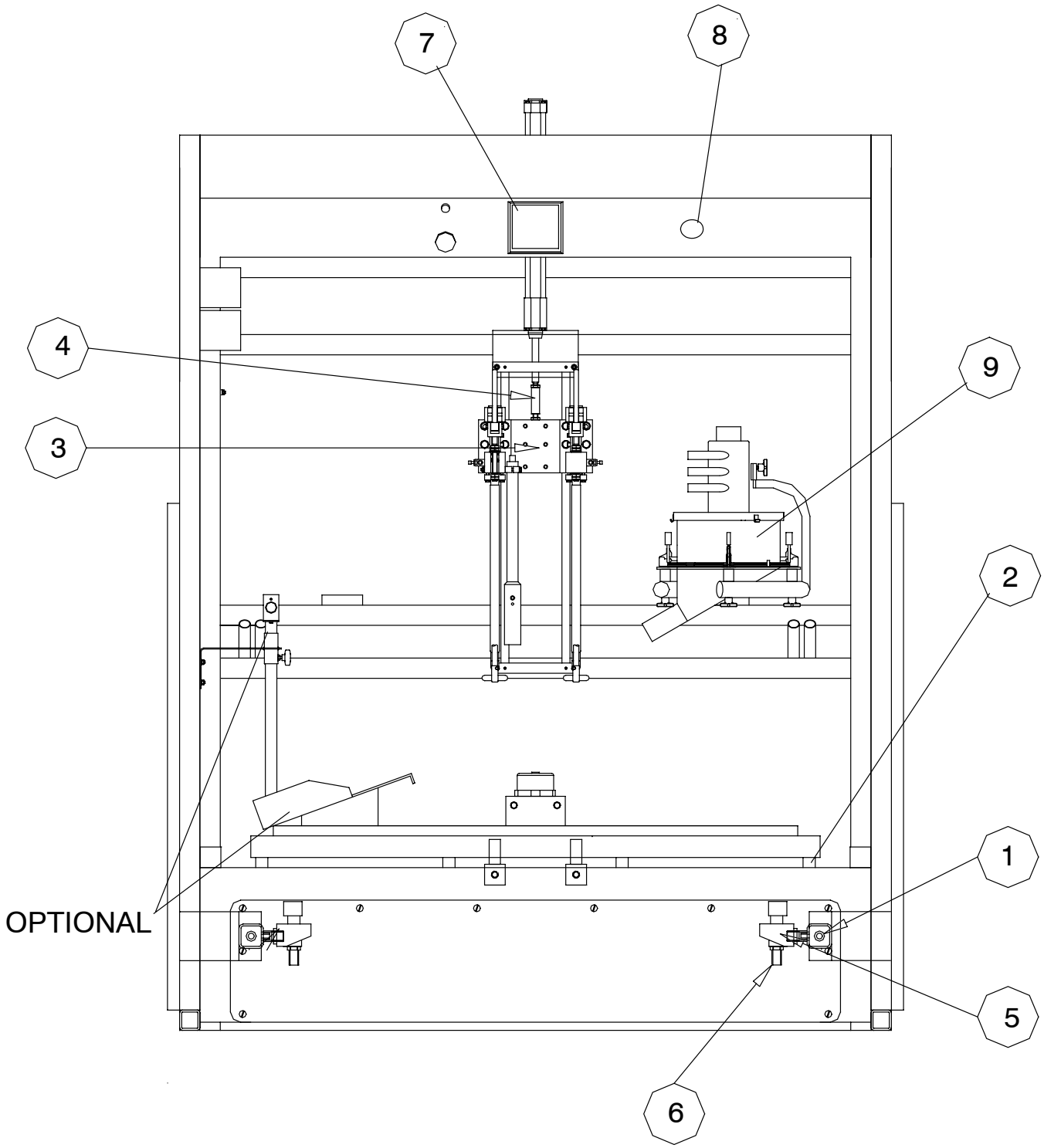

Fig. 7-1 Micro/Powderfeed Centre Front Elevation

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Item	Part	Description	Quanity	Note
1	767 956	MANIFOLD,POWDER CLEANING TO CYCLONE	1	AB
2	765 749	MOUNT, ANTI–VIBRATION, EASY–SCREEN	8	AB
3	767 949	SLIDER,TRIPLE ARM,C/FEED	1	AB
4	768 564	CYLINDER,CONN ROD,SMALL.	1	AB
5	768 405	VALVE,SOLENOID,2/2,3/4",24VDC	AR	AB
6	767 996	HOSE TAIL 3/4"	AR	AB
7	–	TOUCH SCREEN, SIEMENS	AR	AB
8	768 002	GAUGE, MINI HELIC	1	C
9	736 713	SIEVE ASSEMBLE, FEED CENTRE	1	A
NS	767 997	HOSE,AIR,3/4"	AR	AB
	768 135	VALVE,SAFETY RELIEF	AR	AB
	768 405	VALVE,PULSE,2/2,3/4"BSP,24V	AR	AB
	768 282	REGULATOR,3/4" BSP,c/w 11 BAR GAUGE	AR	AB
	769 514	CLIP,JUBILEE,25–30MM	AR	AB
	767 988	CAP,MALE,BLACK,3/4"	AR	AB
	768 251	TUBING,POLY,6MM OD,BLUE,/MTR	AR	AB
	768 252	TUBING,POLY,8MM OD,BLUE,/MTR	AR	AB
	768 262	TUBING,POLY,10MM OD,BLUE,/MTR	AR	AB
	769 814	SEALANT,ACRYLIC,TUBE,WHITE	AR	AB
	768 411	GUN,AIR,SAFETY BLOW	1	AB
	768 253	HOSE 5/16 (PER METRE)	AR	AB
	765 800	FABRICATION,HOOK,GUN	1	AB

NOTE A: ALL PARTS LISTED ABOVE ARE USED UPON POWDER FEED CENTRES
B: ALL PARTS LISTED ABOVE ARE USED UPON MICRO FEED CENTRES
C: OPTIONAL SIEVE ASSEMBLY. SEE SEPARATE MANUAL FOR DETAILS
AR: As Required
NS: Not Shown

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3. Powder Feed Centre Side Elevation

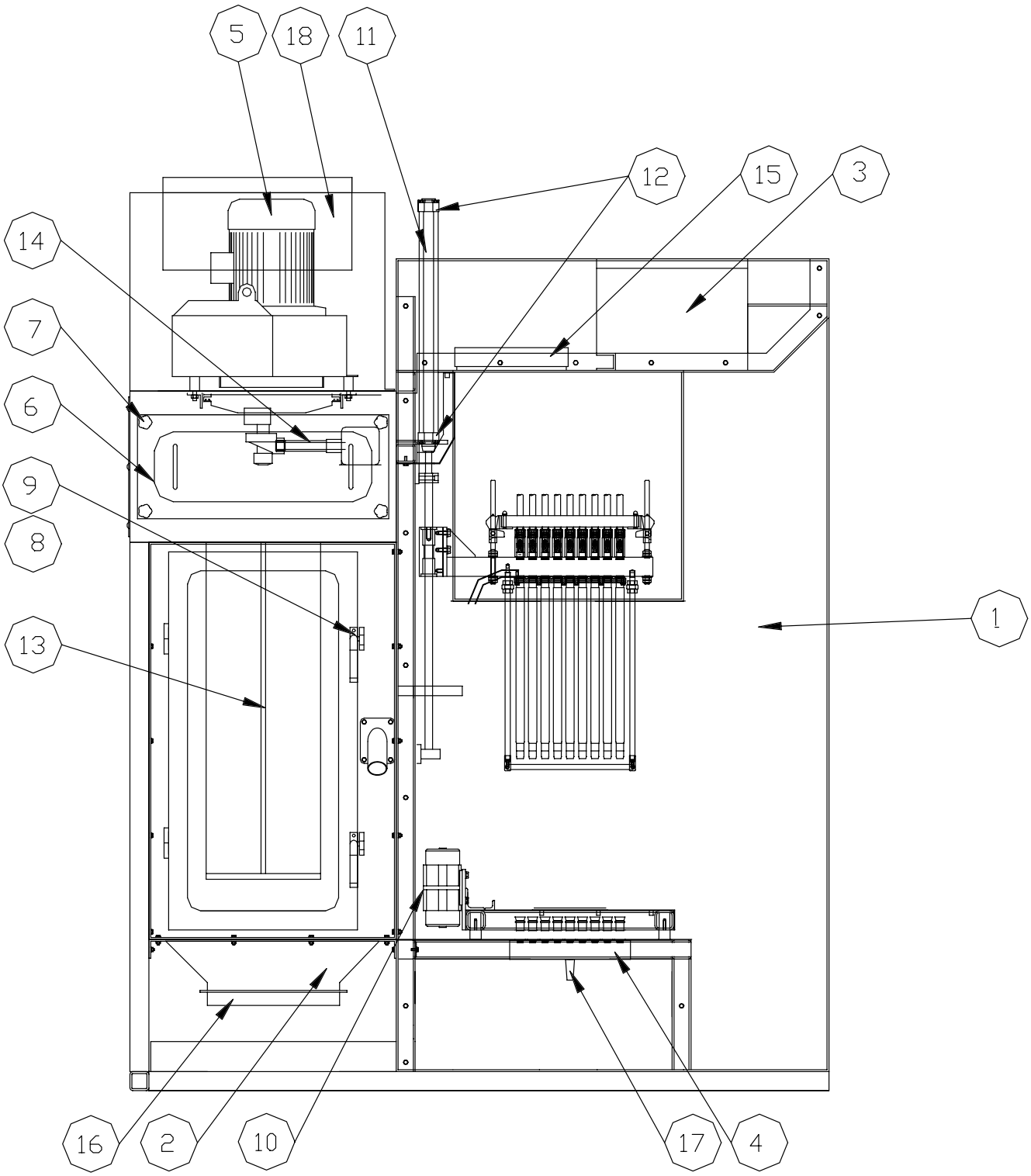

Fig. 7-2 Powderfeed Centre Side Elevation

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Item	Part	Description	Quanity	Note
1	768 578	FAB,FEED CENTRE,BASE,GEN 3	1	
2	768 578	FAB,FLAT FLOOR OPTION	1	
	768 581	FAB,FLUID BED OPTION	1	
3	768 805	CONTROL PANEL,POWDERFEED	1	
4	767 925	BRACKET,MANIFOLD SUPPORT,C/FEED	AR	
5	766 201	FAN,2000 CFM,6” SWG	1	
	769 055	SWITCH, AIRFLOW	1	
6	767 211	SEAL,SIDE,KNOCK–ON,MTR	AR	
7	769 511	KNOB,STAR,M8	AR	
8	767 145	HOOK,BOOTH DOOR	4	
9	767 143	HANDLE,BOOTH (ROLLER ON LEFT)	2	
	767 144	HANDLE,BOOTH (ROLLER ON RIGHT)	2	
10	765 765	VIBRATOR, ELECTRIC, 3–PHASE	1	
11	767 932	CYLINDER DNU–40–550–PPV–A	1	
12	767 935	RESTRICTOR,CYLINDER MOUNT,1/4 x 6mm	AR	
13	174 722	BRACKET,CENTERING,FILTER	3	
	176 278	ROD,FILTER MOUNT,32IN	3	
	174 720	SUPPORT,FILTER MOUNT	3	
	180 772	FILTER,32,HVY–DUTY,CENTER–MNT	3	
14	768 100	NIPPLE,BARREL,1” BSP,180MM LG	3	
	165 726	NOZZLE,CARTRIDGE PULSE	3	
	768 406	VALVE,PULSE,2/2,1”BSP,24V	3	
15	767 300	LIGHT ASSEMBLY	1	
	767 303	PERSPEX,LIGHT PANEL	1	
	767 304	WEATHER SEAL / METRE	3	
16	766 094	FLUID BED,HOPPER,MODULE,958 x 533	1	A
17	767 966	HOSE TAIL 3/4”, PER LANCE	AR	
18	767 046	FILTER,FINAL	1	B
NS	244 721	PUMP,POWDER,TRANSFER .75OUTLET	1	A
	769 048	TERMINAL BLOCK,10A,12 WAY	AR	
	769 000	ENCLOSURE,TERMINAL,8 WAY,PLASTIC	AR	
	768 003	REGULATOR,AIR,1/4”	AR	
	766 606	BUCKET,WASTE,ASSY.	1	A

NOTE A: ONLY USED ON FLUID BED OPTIONS
B: FITTED IF OPTION REQUIRED
AR: As Required
NS: Not Shown

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4. Micro Feed Centre Side Elevation

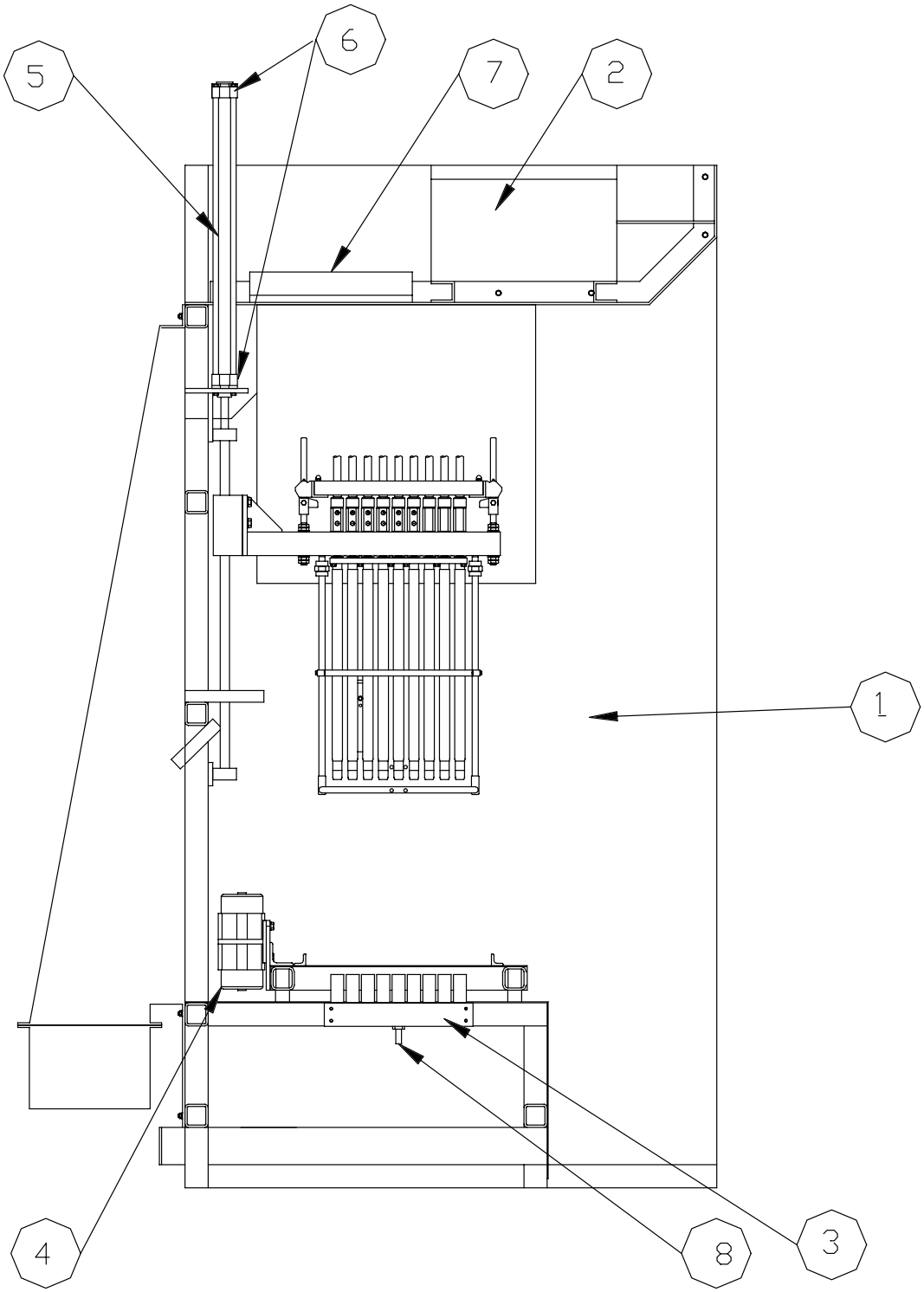

Fig. 7-3 Micro Feed Centre Side Elevation

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Item	Part	Description	Quanity	Note
1	768 565	FABRICATION KIT,MICRO FEED CENTRE,BASE	1	
2	768 806	CONTROL PANEL,MICRO FEED	1	
3	767 925	BRACKET,MANIFOLD SUPPORT,C/FEED	AR	
4	765 765	VIBRATOR, ELECTRIC, 3–PHASE	1	
5	767 932	CYLINDER DNU–40–550–PPV–A	1	
6	767 935	RESTRICTOR,CYLINDER MOUNT,1/4 x 6mm	AR	
7	767 300	LIGHT ASSEMBLY	1	
	767 303	PERSPEX,LIGHT PANEL	1	
	767 304	WEATHER SEAL / METRE	3	
8	767 966	HOSE TAIL 3/4”, PER LANCE	AR	
NS	769 048	TERMINAL BLOCK,10A,12 WAY	AR	
NS	769 000	ENCLOSURE,TERMINAL,8 WAY,PLASTIC	AR	
NS	768 003	REGULATOR,AIR,1/4”	AR	

AR: As Required
NS: Not Shown

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5. Straight Through Pump Lance Assembly

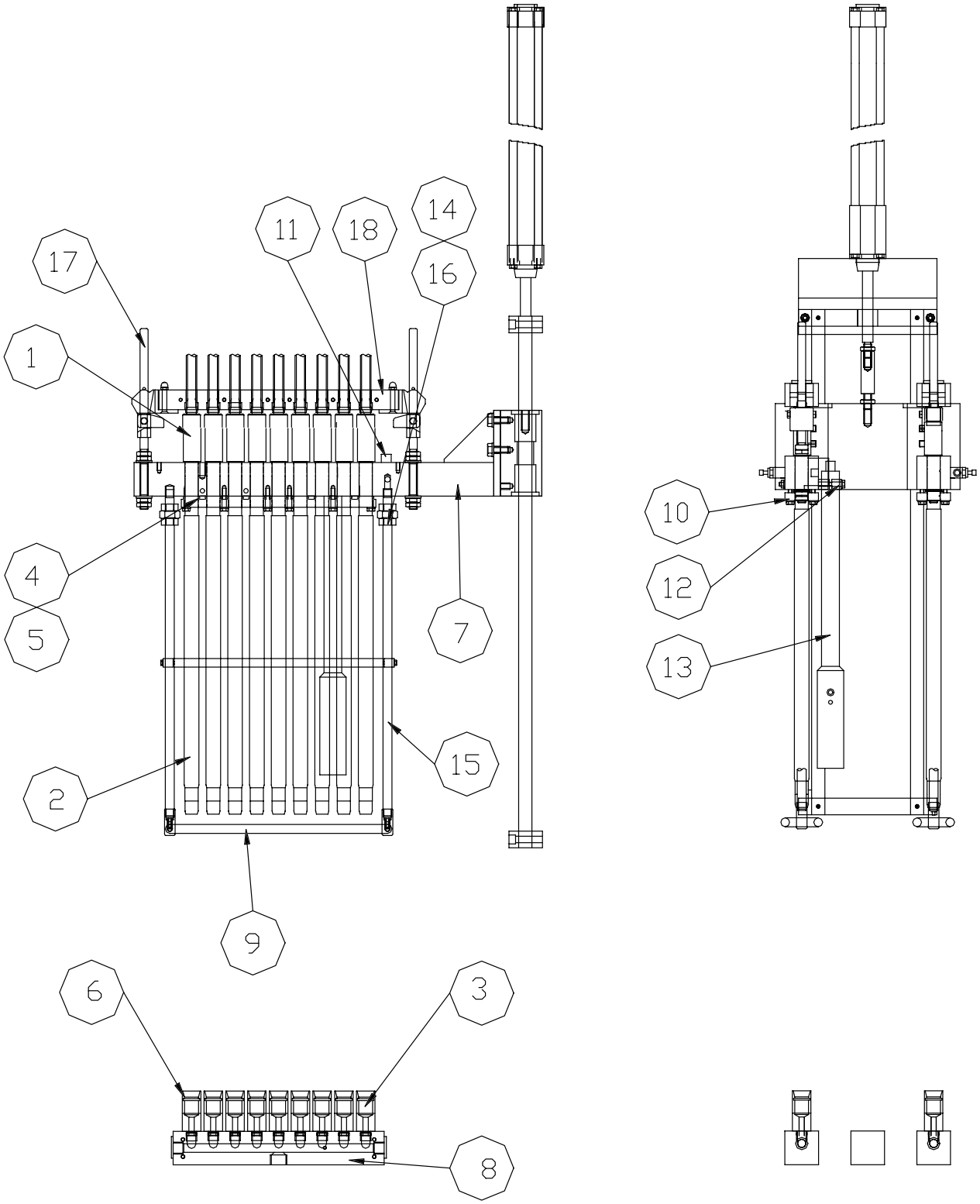

Fig. 7-4 Straight Through Pump Lance Assembly

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Item	Part	Description	Quanity	Note
1	100 3918	PUMP,INLINE,POWDERFEED EUROPE	AR	
2	768 595	DIP LEG,STRAIGHT THROUGH,PUMP	AR	
3	768 800	NOZZLE,PURGE,MANIFOLD	AR	
4	768 802	CIRCLIP,EXT,ST/ST,20MM	AR	
5	768 803	O–RING,CONDUCTIVE, 2 PER DIP LEG	AR	
6	768 804	O–RING,CONDUCTIVE, 1 PER PURGE NOZZLE	AR	
7	768 587	LANCE ARM	AR	A
8	768 582	MANIFOLD,PUMP PURGE, PER LANCE	AR	
9	768 801	RING,FLUIDISATION, PER LANCE	AR	
10	768 586	KEEP PLATE,DIP LEG, PER LANCE	AR	
11	768 422	REGULATOR,FLOW,1/4 – 6mm, PER LANCE	AR	
12	768 579	CLAMP,LEVEL,PROBE,	1	
13	767 926	LEVEL PROBE	1	
14	768 294	UNION,1/4” BSP,ST/ST, 2 OFF PER LANCE	AR	
15	768 818	PIPE,1/4”BSP,ST/ST,MEDIUM, 2 OFF PER LANCE	AR	
16	768 116	NIPPLE,BARRELL,1/4BSP, 2 OFF PER LANCE	AR	
17	768 568	KIT,LIGHT/DARK MANIFOLD,S/T PUMP, PER LANCE	AR	
18	768 813	CLAMPING PLATE, HI FLO HOSE, PER LANCE	AR	C
	768 812	CLAMPING PLATE, LO FLO HOSE, PER LANCE	AR	C
NS	767 937	PLUG,BLANKING,1/2”BSP 2 OFF PER LANCE	AR	
	768 588	PANEL,FRONT SECTION,S/THROUGH PUMP	1	
	768 590	TUBE SUPPORT, S/THROUGH PUMP	AR	B
	768 593	BLANK,TUBE SUPPORT, S/T PUMP	AR	B
	768 583	MANIFOLD,BLANK,PUMP PURGE	AR	
	768 594	PLUG,PURGE,MANIFOLD	AR	

NOTE A: 1 LANCE: UPTO 9 PUMPS,2 LANCES: 10–18 PUMPS, 3 LANCES: 19–27 PUMPS
B: AS REQUIRED DEPENDENT UPON HOW MANY LANCES
C: THESE CAN BE ORDERED SEPARATELY FOR LIGHT/DARK MANIFOLD SETS
AR: As Required
NS: Not Shown

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6. Modular Pump Lance Assembly

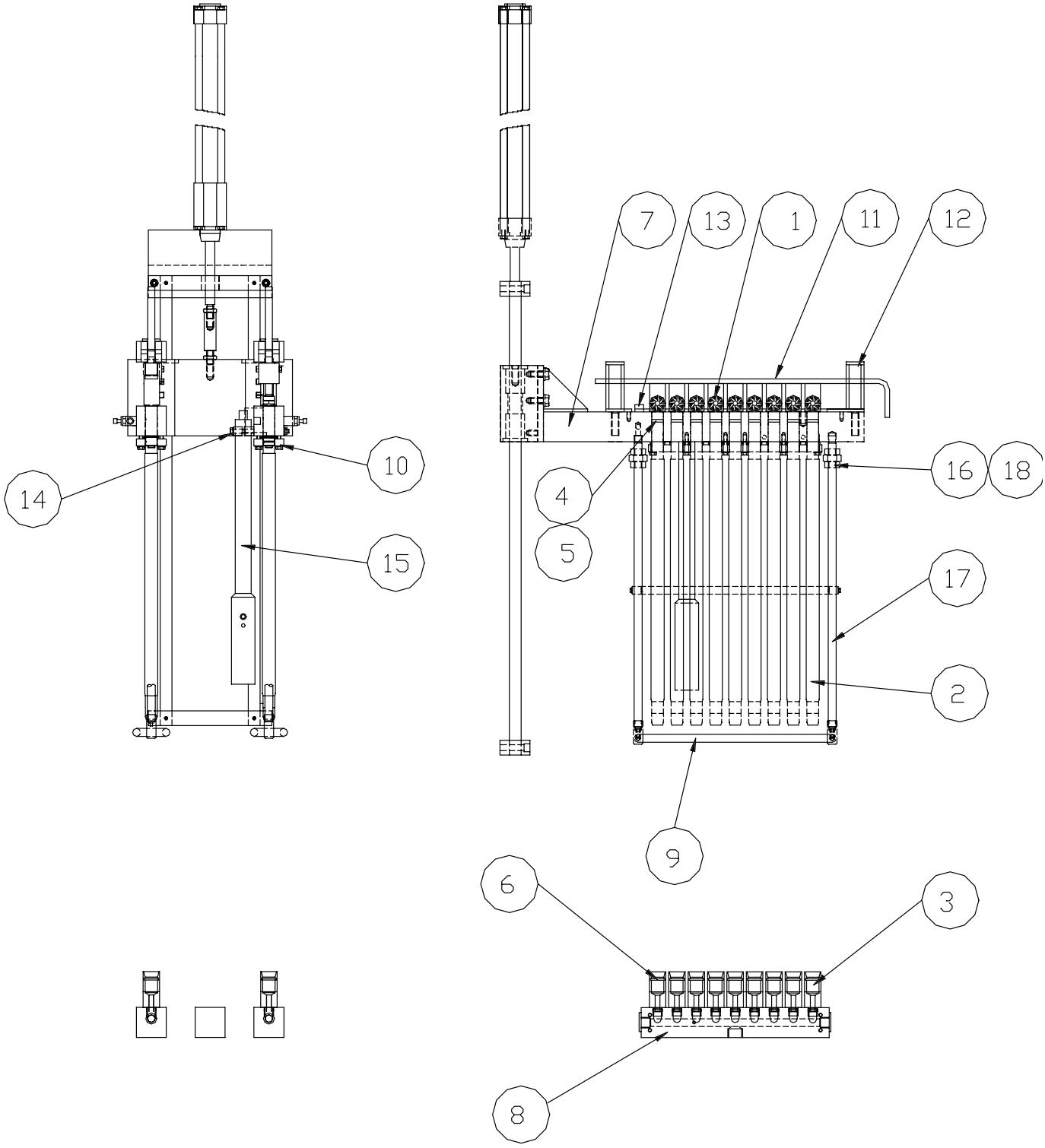

Fig. 7-5 Modular Pump Lance Assembly

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Item	Part	Description	Quanity	Note
1	767 911	PUMP,MODULAR,CORONA, FEED CENTRE	AR	
	767 910	PUMP,MODULAR,TRIBO 2, FEED CENTRE	AR	
	631 434	PUMP POWDER TRIBO 1, FEED CENTRE	AR	
2	768 596	DIP LEG,MODULAR,PUMP	AR	
3	768 800	NOZZLE,PURGE,MANIFOLD	AR	
4	768 802	CIRCLIP,EXT,ST/ST,20MM	AR	
5	768 803	O–RING,CONDUCTIVE, 2 PER DIP LEG	AR	
6	768 804	O–RING,CONDUCTIVE, 1 PER PURGE NOZZLE	AR	
7	768 587	LANCE ARM	AR	A
8	768 582	MANIFOLD,PUMP PURGE, PER LANCE	AR	
9	768 801	RING,FLUIDISATION, PER LANCE	AR	
10	768 586	KEEP PLATE,DIP LEG, PER LANCE	AR	
11	768 527	PUMP,RETAINING ROD, MODULAR, PER LANCE	AR	
12	768 528	BLOCK,PUMP RETAINER, 2 OFF PER LANCE	AR	B
13	768 422	REGULATOR,FLOW,1/4 – 6mm, PER LANCE	AR	
14	768 579	CLAMP,LEVEL,PROBE,	1	
15	767 926	LEVEL PROBE	1	
16	768 294	UNION,1/4” BSP,ST/ST, 2 OFF PER LANCE	AR	
17	768 818	PIPE,1/4”BSP,ST/ST,MEDIUM, 2 OFF PER LANCE	AR	
18	768 116	NIPPLE,BARRELL,1/4BSP, 2 OFF PER LANCE	AR	
NS	767 937	PLUG,BLANKING,1/2”BSP 2 OFF PER LANCE	AR	
	768 591	PANEL,FRONT SECTION,MODULAR PUMP	1	
	768 592	HOSE SUPPORT PLATE	AR	D
	768 593	BLANKING PLATE,HOSE OUTLET	AR	D
	768 525	2nd BLOCK,PUMP RETAINER, 2 OFF PER LANCE	AR	C
	768 526	3nd BLOCK,PUMP RETAINER, 2 OFF PER LANCE	AR	C
	768 519	2nd LANCE PUMP ADAPTOR, 1 OFF PER PUMP	AR	C
	768 526	3rd LANCE PUMP ADAPTOR, 1 OFF PER PUMP	AR	C
	765 634	O–RING, CONDUCTIVE, 2 OFF PER PUMP ADAPTOR	AR	C
	768 583	MANIFOLD,BLANK,PUMP PURGE	AR	
	768 594	PLUG,PURGE,MANIFOLD	AR	

NOTE A: 1 LANCE: UPTO 9 PUMPS,2 LANCES: 10–18 PUMPS, 3 LANCES: 19–27 PUMPS

B: 1 & 2 LANCE(S) USE : BLOCK PUMP RETAINER. ONLY

C: 3 LANCES USES 1ST, 2ND AND 3RD BLOCK, PUMP RETAINERS, PLUS 2ND & 3RD ADAPTORS (2 X O–RINGS REQUIRED PER ADAPTOR)

D: AS REQUIRED DEPENDANT UPON HOW MANY LANCES

AR: As Required

NS: Not Shown

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7. Modular Pump Light Dark Manifold (OPTIONAL)

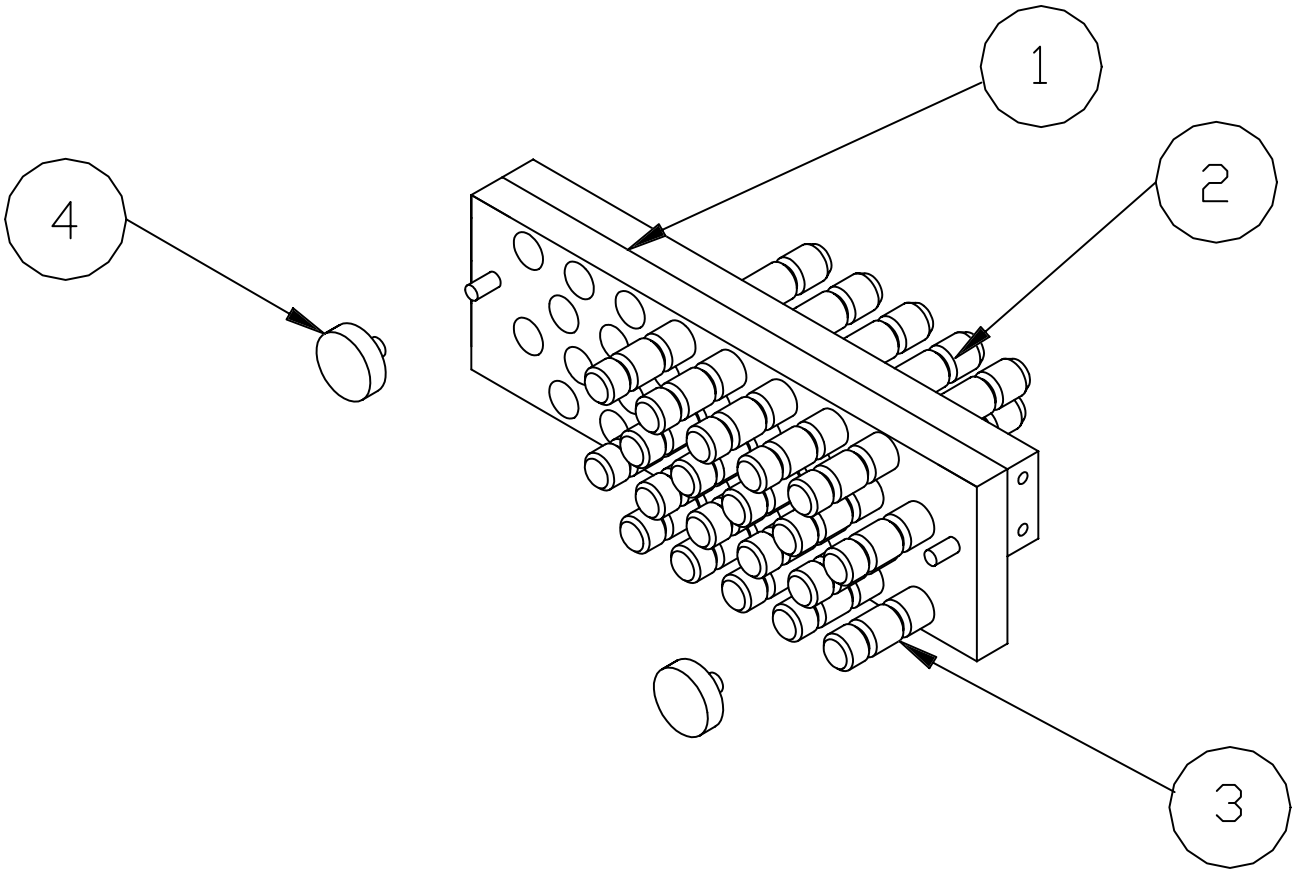

Fig. 7-6 Light/Dark Manifold (Modular Pump)

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Item	Part	Description	Quanity	Note
1	768 569	KIT,FAB.,LIGHT/DARK MANIFOLD,PER LANCE	AR	
2	768 816	CONNECTOR,MALE,2 OFF PER PUMP	AR	
3	768 815	CONNECTOR FEMALE, 1 OFF PER PUMP	AR	
4	769 511	KNOB,STAR,M8	2	
NS	940 163	O–RING (PER CONNECTOR)	AR	
AR: As Required NS: Not Shown				

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Section 8

Specifications

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Section 8
Specifications

1. Technical Data

Electrical Requirements

380/415V, 3–phase + Neutral 50Hz, star/delta, IP55

Other voltages and starters are supplied on request, check on your circuit diagrams.

Pneumatic Requirements

Dry, clean air at 90–95 p.s.i., filtered to 5μ, or dried to 2 degree C dew point, oil free.

2. Weights and Dimensions

Part No.	Description	Dimensions mm (L x W x H)	Weight (Kgs)
768560	Micro Feed Centre	1510 x 1750 x 2370	445
768570	Powder Feed Centre (c/w Flat Floor)	1850 x 1750 x 2415	520
768571	Powder Feed Centre (c/w Fluid Bed)	1850 x 1750 x 2415	525

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