Nordson MicroMax Booth

Manual Spray Booth

Manual P/N 768635_11 - English -

Issued 11/17

Keep for future reference



NORDSON (UK) LTD. • STOCKPORT

CE

Order number P/N = Order number for Nordson products

Notice

This is a Nordson Corporation publication which is protected by copyright. Original copyright date 2000. No part of this document may be photocopied, reproduced, or translated to another language without the prior written consent of Nordson Corporation. The information contained in this publication is subject to change without notice. - Original Document -

Trademarks

AccuJet, AeroCharge, Apogee, AquaGuard, Asymtek, Automove, Autotech, Bailgun, Blue Box, Bowtie, Build-A-Part, CanWorks, Century, CF, CleanSleeve, CleanSpray, Color-on-Demand, ColorMax, Control Coat, Coolwave, Cross-Cut, cScan+, Dage, Dispensejet, DispenseMate, DuraBlue, DuraDrum, Durafiber, DuraPail, Dura-Screen, Durasystem, Easy Coat, Easymove Plus, Ecodry, Econo-Coat, e.DOT, EFD, Emerald, Encore, ESP, e stylized, ETI-stylized, Excel 2000, Fibrijet, Fillmaster, FlexiCoat, Flexi-Spray, Flex-O-Coat, Flow Sentry, Fluidmove, FoamMelt, FoamMix, Fulfill, GreenUV, HDLV, Heli-flow, Helix, Horizon, Hot Shot, iControl, iDry, iFlow, Isocoil, Isocore, Iso-Flo, iTRAX, JR, KB30, Kinetix, KISS, Lean Cell, Little Squirt, LogiComm, Magnastatic, March, Maverick, MEG, Meltex, Microcat, Micromark, Micromedics, Micro-Meter, MicroSet, Microshot, Millenium, Mini Blue, Mini Squirt, Moist-Cure, Mountaingate, MultiScan, NexJet, No-Drip, Nordson, Optimum, Package of Values, Paragon, PatternView, PermaFlo, PICO, PicoDot, PluraFoam, Porous Coat, PowderGrid, Powderware, Precisecoat, PRIMARC, Printplus, Prism, ProBlue, Prodigy, Pro-Flo, Program-A-Bead, Program-A-Shot, Program-A-Stream, Program-A-Swirl, ProLink, Pro-Meter, Pro-Stream, RBX, Rhino, Saturn, Saturn with rings, Scoreguard, SC5, S. design stylized, Seal Sentry, Sealant Equipment & Engineering, Inc., SEE and design, See-Flow, Select Charge, Select Cure, Servo-Flo, Shot-A-Matic, Signature, Slautterback, Smart-Coat, Smart-Gun, Solder Plus, Spectrum, Speed-Coat, Spraymelt, Spray Squirt, Sure-Bead, Sure Clean, Sure Clean, Sure Cwat, Sure-Max, Sure Wrap, Tela-Therm, Tip-Seal, Tracking Plus, TRAK, Trends, Tribomatic, TrueBlue, TrueCoat, Tubesetter, Ultra, UniScan, UpTime, u-TAH, Value Plastics, Vantage, Veritec, VersaBlue, Versa-Coat, VersaPaul, Versa-Screen, Versa-Spray, VP Quick Fit, Walcom, Watermark, When you expect more., X-Plane are registered trademarks - ® - of Nordson Corporation.

Accubar, Active Nozzle, Advanced Plasma Systems, AeroDeck, AeroWash, Allegro, AltaBlue, AltaSlot, Alta Spray, AquaCure, Artiste, ATS, Auto-Flo, AutoScan, Axiom, Best Choice, BetterBook, Blue Series, Bravura, CanNeck, CanPro, Celero, Chameleon, Champion, Check Mate, ClassicBlue, Classic IX, Clean Coat, Cobalt, ContourCoat, Controlled Fiberization, Control Weave, CPX, cSelect, Cyclo-Kinetic, DispensLink, DropCure, Dry Cure, DuraBraid, DuraCoat, e.dot+, E-Nordson, Easy Clean, EasyOn, EasyPW, Eclipse, Equalizer, Equi=Bead, Exchange Plus, FillEasy, Fill Senty, Flow Coat, Fluxplus, Freedom, G-Net, G-Site, Genius, Get Green With Blue, Gluie, Ink-Dot, IntelliJet, iON, Iso-Flex, ITrend, KVLP, Lacquer Cure, Maxima, Mesa, MicroFin, MicroMax, Mikros, MiniEdge, Minimeter, MonoCure, Multifil, MultiScan, Myritex, Nano, OmniScan, OptiMix, OptiStroke, Optix, Origin, Partnership+Plus, PatternJet, PatternPro, PCI, PharmaLok, Pinnacle, Plasmod, PluraMix, Powder Plot, Powercure, Process Sentry, Pulse Spray, PURBlue, PURJet, PuTTech, Quad Cure, Quantum, Ready Coat, RediCoat, RollVIA, Royal Blue, Select Series, Sensomatic, Shatfshield, SheetAire, Smart, Smartli, SolidBlue, Spectral, Spectronic, SpeedKing, Spray Works, StediFlo, StediTherm, Summit, Sure Brand, SureFoam, SureMix, SureSeal, Swirl Coat, TAH, Tempus, ThruWave, TinyCure, Trade Plus, Trilogy, Ultra Max, Ultrasaver, Ultrasmart, Universal, ValueMate, Versa, Viper, Vista, WebCure, YESTECH, 2 Rings (Design) are trademarks - ^(III) of Nordson Corporation.

Designations and trademarks stated in this document may be brands that, when used by third parties for their own purposes, could lead to violation of the owners' rights.

① http://www.nordson.com/en/global-directory

EC DECLARATION OF CONFORMITY

ACCORDING TO CE DIRECTIVE 2006/42/ EG ANNEX II A

DESCRIPTION:	MicroMax Booth (Range 1 to 18 and X-1 to X-18)
FAMILY/MODELS:	All variants and models and components
APPLICABLE DIRECTIVES:	Directive 2006/42/EG (Machinery) and following amendments 2014/34/EU Explosive Atmosphere
STANDARDS USED TO VERIFY COMPLIANCE:	EN 60204-1: 2006 "Safety of Machinery - Electrical equipment of machines" EN ISO 12 100 "Safety of machinery - Basic concepts, general principles for design"
MARKING OF PRODUCT:	CE
MARKING/USE OF COMPONENTS	
IN ATEX ZONES	EX II 3D T 60°C or min. IP54

The equipment delivered is generally intended to be part of a powder coating system, and can be operated on its own or in conjunction with other equipment.

In order to be in full compliance with the CE machinery directive and its amendments, the customer is obliged to respect the applicable regulations for his powder coating system upon incorporation of the equipment in the powder coating plant and before starting operation.

We hereby declare that the product specified conforms to the directives and standards described above and that it has been provided with a CE label. Provided the product is installed and operated in line with the Nordson manuals, its operation is safe.

Kai Fločkenhaus Manager Procurement & Process, ICS Europe (Industrial Coating Systems) Nordson Deutschland GmbH 40699 Erkrath

Date: 07/05/15

I

Table of Contents

Congratulations on the Purchase of Your Nordson Product

Section 1	
Safety	

Section 2 Description

Section 3 Installation

Your Safety is Important to Nordson		
1.	Introduction 1-1	
2.	Qualified Personnel 1-1	
3.	Intended Use 1-1	
4.	Regulations and Approvals 1-1	
5.	Personal Safety 1-2	
6.	Fire Safety 1-3	
7.	Action in the Event of a Malfunction 1-4	
8.	Disposal 1-4	
1. 2.	Intended Use	
1.	Transport	
2.	Unpacking	
3.	Removing 3-1	
4.	Storage 3-1	
5.	Disposal 3-1	
6.	Setting up the Unit	
7.	Using New Cartridges 3-2	
8.	Electrical 3-3	
9.	Pneumatic	

Section 4 Operation	1. Daily Start up and Shutdown 4-1
Section 5	1. Daily Maintenance 5-1
Maintenance	2. Routine Maintenance 5-2
	Fan Assembly 5-2
	Cartridges 5-2
	Fluid Beds 5-2
	Compressed Air 5-2
	3. Fluid Bed Replacement 5-3
	4. Blow Down Valve Assembly Replacement 5-4
	5. Cartridge Replacement 5-4
Section 6 Troubleshooting	1. Important Hints for Troubleshooting
Section 7	1. Introduction
Parts	Using the Illustrated Parts List
	MicroMax 1 Illustration 7-2
	MicroMax 2 Illustration 7-3
	MicroMax 3/3a & 17 Illustration
	MicroMax 4 Illustration 7-5
	MicroMax 5 Illustration 7-6
	2. Parts List MicroMax 1 - 5 & 17 7-7
	MicroMax 7-16 Module Illustration
	3. Parts List MicroMax 7 - 16
	4. MicroMax Sieve Hopper

Section 8 Specifications

1.	Electrical
2	Weights
3	Noise
4	Pneumatic Supply 8-2
5	MicroMax 1 Dimensions 8-3
6	MicroMax 2 Dimensions 8-3
7.	MicroMax 3 Dimensions 8-4
8	MicroMax 4 Dimensions 8-4
9	MicroMax 5 Dimensions 8-5
1	0. MicroMax 7-16 Module Dimensions
1	1. MicroMax 7 Dimensions 8-6
1:	2. MicroMax 8 Dimensions 8-6
1;	3. MicroMax 9 Dimensions 8-7
14	4. MicroMax 10 Dimensions 8-7
1	5. MicroMax 11 Dimensions 8-8
1	6. MicroMax 12 Dimensions 8-8
1	7. MicroMax 13 Dimensions 8-9
18	8. MicroMax 14 Dimensions 8-9
19	9. MicroMax 15 Dimensions 8-10
2	0. MicroMax 16 Dimensions 8-10
2	1. MicroMax 17 Dimensions 8-11

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 <i>Safety</i> 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	Nordson (U.K.) Ltd. Ashurst Drive Cheadle Heath Stockport England SK3 0RY
	Telephone: 0044 (0) 161-495-4200 Fax: 0044 (0) 161-428-6716
	For a list of local Nordson organisations, see Nordson International.

Safety

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.

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.

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.

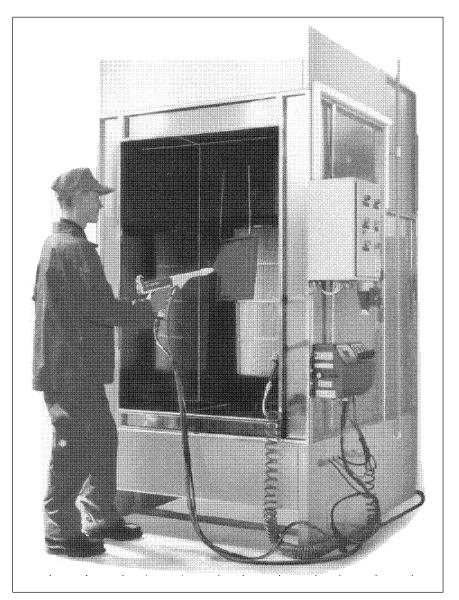
7.	Action in the Event of a Malfunction	If a system or any equipment in a system malfunctions, shut off the system immediately and perform the following steps:
		 Disconnect and lock out electrical power. Close pneumatic shutoff valves and relieve pressures.
		 Identify the reason for the malfunction and correct it before restarting the equipment.
<i>8.</i>	Disposal	Dispose of equipment and materials used in operation and servicing according to local codes.

Description

Section 2 Description

1. Intended Use

Free standing ductless booth with built-in cartridge recovery system for manual powder coating, useable as either multi colour, non-recovery, or dedicated one colour use, with integral sieve and recycle.



2. Features

Nordson cartridge filter powder recovery systems do not require expensive ductwork or explosion venting. All the air used to contain and recover powder over-spray passes through the cartridge filters before being returned to the workshop as clean air. An operator controlled semi automatic cleaning system prolongs cartridge life.

- Stainless steel canopy, constructed for durability and ease of cleandown.
- Complete with electrical control panel.
- Integral sieve powder feed hopper within the base of the booth for single colour use. (only on MicroMax 1-5)
- Fluorescent light in the booth canopy roof (not available on MicroMax 5).
- Manual gun electrical service connection included.
- Simple installation. Single power and air connections only required.
- Quiet operation.



WARNING: MicroMax Booths are manufacture not to be vented through a duct. If this is necessary, a fan assisted ductwork system must be used, which gives negative pressure drop.



WARNING: MicroMax Booths are manufactured for light use with one manual gun for single sige booths and two manual guns for double sided booths. MicroMax booths are not intended for use with Automatic guns, if provision is made to comply with EN 50177

Installation

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. Do not throw the unit. Use suitable packaging materials and sturdy cartons. See <i>Specifications</i> section for dimensions and weights.
		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.

6. Setting up the Unit



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

- 1. Check all electrical and pneumatic connections.
- 2. Check that the overload setting for the motor is set to a value appropriate for the motor in use.
- 3. Start the fan and check operation of the fan contacter. Check the fan for correct direction of rotation.
- 4. Set timer on airflow switch circuit to 5-8 seconds.
- 5. Check operation of the airflow switch. This is used to interlock the application equipment supply and should only be on when the fan is running.
- 6. Set all regulators to zero, ensure that the service air line has been drained before opening the valve to the control panel. Check for air leaks, remedy as necessary.
- 7. Set the pulse air pressure to 4.5 bar.
- 8. Check operation of the booth light.

7. Using New Cartridges



WARNING: The following steps describe procedures for seasoning of new cartridge filters. These steps must be followed whenever 'new' cartridges are installed. Failure to properly season cartridges can result in early clogging filter media and loss of use.

8. Electrical



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

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, 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.

Check operation of solenoid valves. The valves should open and close sequentially to the preset dwell between each pulse.

Before connecting to an air supply ensure that the available air is of the correct quality. (Refer to Technical Section). Nordson can advise on suitable air conditioning equipment to provide air of a suitable quality.

The pneumatic connection (BSP thread) is made next to the air reservoir or into the Nordson control panel and is provided with a ball valve for system isolation. Ensure that when bringing in the air connection there is a drain leg for the collection of any materials or oil that may be in the air lines before the connection is made to the control panel.

Air pressure of approximately 4.5 bar is required for fast efficient operation. We suggest a regulated supply be used (with a pressure gauge next to reservoir or in the control panel) to ensure that these conditions are fulfilled. Failure to do so could result in poor cleaning of the cartridge media.

9. Pneumatic

Operation

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. Turn on the supply to the control panel.
- 2. Turn on the panel isolator.
- 3. Start the fan.
- 4. If a powder re-cycle system is fitted, turn on the controls and ensure correct operation especially that the fluidising air to the hopper has been turned on and adjusted to allow the powder to bubble gently.
- 5. Turn on the lights.
- 6. Operate the powder spray equipment in accordance with the manufacturers instructions.



WARNING: Always ensure when cleaning the booth or application equipment that the fan is running and appropriate Personal Protective Equipment is worn.

- 7. Shutdown the booth by reversing the above sequence.
- 8. To empty the booth hopper to a waste bucket, connect the output of the transfer pump located at the base of the hopper to the waste bucket. Connect the vent from the hopper back into the booth using the spigot supplied. Operate the empty switch until the bucket is full. Dispose of the waste material according to local regulations.



WARNING: The MicroMax internal sieve should not have more than 10Kgs of powder laid on top. The Maximum pressure of the vibrator should not exceed 3 Bar, Otherwise the life of the vibrator can be dramatically reduced

1. Daily Startup and Shutdown

Maintenance

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

- Visually check the complete system for leaks, rectify.
- Check the operation of any powder transfer systems.
- At Least every hour press the filter cleaning pulse button located on the main control panel.
- Every four (4) hours, with the fan operating, clean the booth interior with a rubber squeegee, or other non-sparking cleaning device, pulling the powder into the hopper section of the booth.
- Every four (4) hours or less check the feeder hopper for powder level. Before adding powder use the vacuum cleaner to prevent powder dust from getting out into the room.
- Every four (4) hours check the powder pump and gun, clean according to the product manual.
- Every four (4) hours clean U.V. detector lenses if fitted.
- Every four (4) hours run the cartridge cleaning sequencer for at least ten (10) minutes, longer if necessary, to maintain air flow.

2. Routine Maintenance	• Check the hopper for foreign materials, empty and clean if necessary.
Fan Assembly	 Changes in vibration and noise levels are easily identified as an indication to possible problems.
Cartridges	 Record the air flow 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 cartridge after ensuring seal integrity
	 Cartridges and final filters cannot be manually cleaned but 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 (where applicable)	 These will be damaged if they are stood on or allowed to become damp. They must be replaced; SMOOTH SIDE UP.
Compressed Air	 Open the drop leg. Using a clean white cloth check for water, oil or other contaminants. Correct as necessary.

3. Fluid Bed Replacement



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



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

- 1. Clean the booth base and walls to avoid unnecessary contact with the powder.
- 2. 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.
- 3. Lock out and disconnect services to the booth.
- 4. With the exhaust fan running, thoroughly clean the booth and remove all powder from the hopper.
- 5. Remove the plenum chamber, by unbolting all the fixings. To remove the plenum it may be necessary to use a larger screwdriver to lever the plenum from the hopper.
- 6. Discard the damaged fluidising plate.
- 7. Check the fitting of the new fluidising plate. Check the alignment of the fixing holes, if necessary drill holes to suit.

NOTE: The fluidising plate is fitted smooth side up.

- 8. The fluidising plate is sealed using an acrylic sealant. On the plenum make a small bead of sealant around the inside of the fixing holes. Place the fluidplate, smooth side uppermost on the plenum. Make a second small bead of sealant again around the inside of the fixing holes on the upper side of the fluid plate. DO NOT use a silicone sealant.
- 9. Offer the plenum up to the bottom of the hopper and secure with the fixing bolts. Tighten the bolts firmly but do not overtighten as this may damage the fluidplate. Remove any excess sealant.

4. Blow Down Valve Assembly Replacement



CAUTION: Before removing blow down valves ensure that the air supply and electrical supply have been turned off and locked out.

- 1. Turn off the air supply.
- 2. Operate the cartridge pulsing for one minute or until the air manifold is completely empty.
- 3. Check on the pulsing air that all the air has been exhausted from the blow down plenum.
- 4. Turn off the electrical supply.
- 5. Remove the access panel at the rear of the booth.
- 6. Remove the suspect valve and inspect and replace if necessary.
- 7. Turn on supplies and test.
- 8. Replace the access panel at the rear of the booth.

5. Cartridge Replacement



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

- 1. Turn off the booth and isolate.
- 2. Ensure all protective clothing is worn, firmly grasp the top of the cartridge and twist clockwise.



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

- 3. Remove by twisting the body anti-clockwise to release and dispose of the old cartridges in accordance to local regualations.
- 4. Replace the cartridge in the reverse order.

Section 6

Troubleshooting

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, any parts that fail must be replaced by approved parts available from Nordson.

Problem	Possible Cause	Corrective Action
Fan will not start	Power off	Switch on power
	Overload operated	Re-set overload
	Breaker tripped	Investigate cause. Re-set breaker
	Wiring fault	Repair or replace
	Motor failure	Investigate cause. Replace.
	Timer on airflow switch set incorrectly.	Adjust timer to 5-8 seconds
	Airflow switch set incorrectly	Locate the airflow switch in fan housing, and adjust setting, to be less sensitive.
	Contactor fault	Repair or replace. Check push button wiring.

Problem	Possible Cause	Corrective Action
Loss of extract throughput	Cartridges not clean	Manually run cleaning sequence for thirty (30) minutes
	Low pulse pressure	Set pressure at 4.5 bar
	Cleaning valve fault	Repair or replace
Powder escaping	Cartridge leak	Check cartridge seal
		Tighten cartridge
		Replace cartridge
	Powder pump not correctly fitted to spigot	Refit, check condition of o-ring. Replace o-ring if necessary.
	Powder hose leak	Replace damaged hose and clips

Section 7

Parts

Section 7 Parts

1. Introduction	To order parts, call the Nordson Customer Service Center or your local Nordson representative. Use the parts list, and the accompanying illustration, to describe and locate parts correctly.		
<i>Using the Illustrated Parts List</i>	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 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		

Item	Part	Description	Quantity	Note
—	000 0000	Assembly	1	
1	000 000	Subassembly	2	А
2	000 000	• • Part	1	

• If you order the assembly, items 1 and 2 will be included.

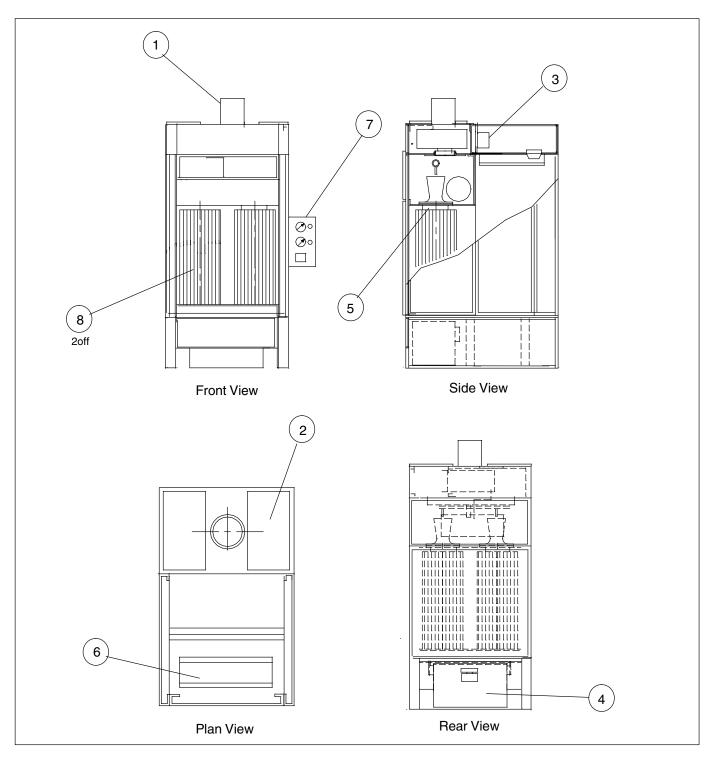
relationships between assemblies, subassemblies, and parts.

- If you order item 1, item 2 will be included.
- If you order item 2, you will receive item 2 only.

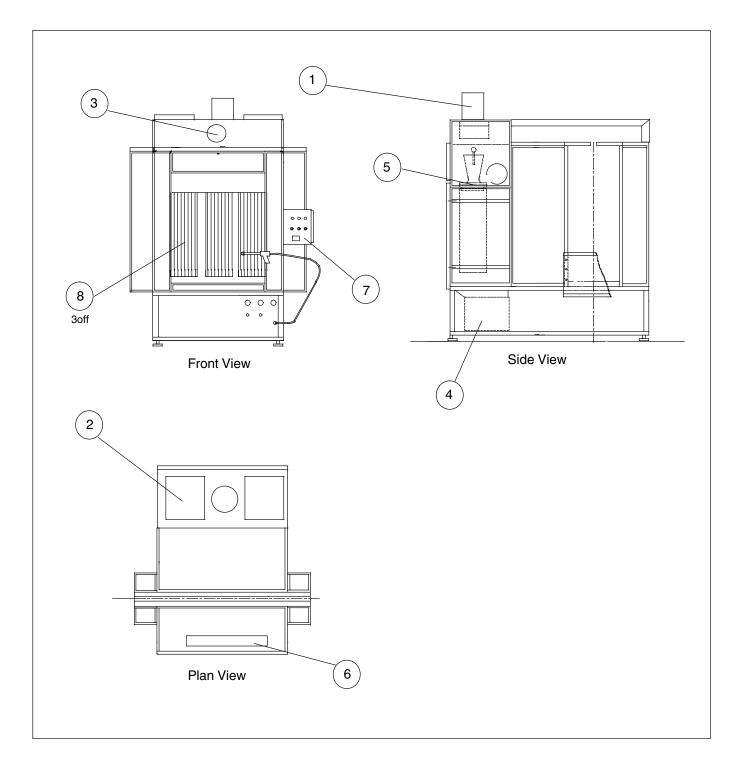
The number in the Quantity column is the quantity required per unit, assembly, or subassembly. The code AR (As Required) is used if the part number is a bulk item ordered in quantities or if the quantity per assembly depends on the product version or model.

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.

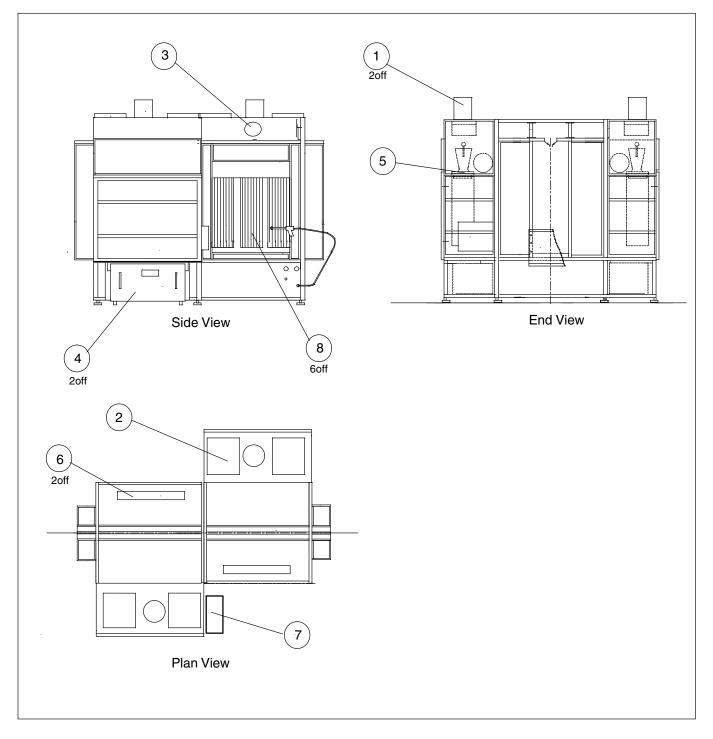
MicroMax 1 Illustration



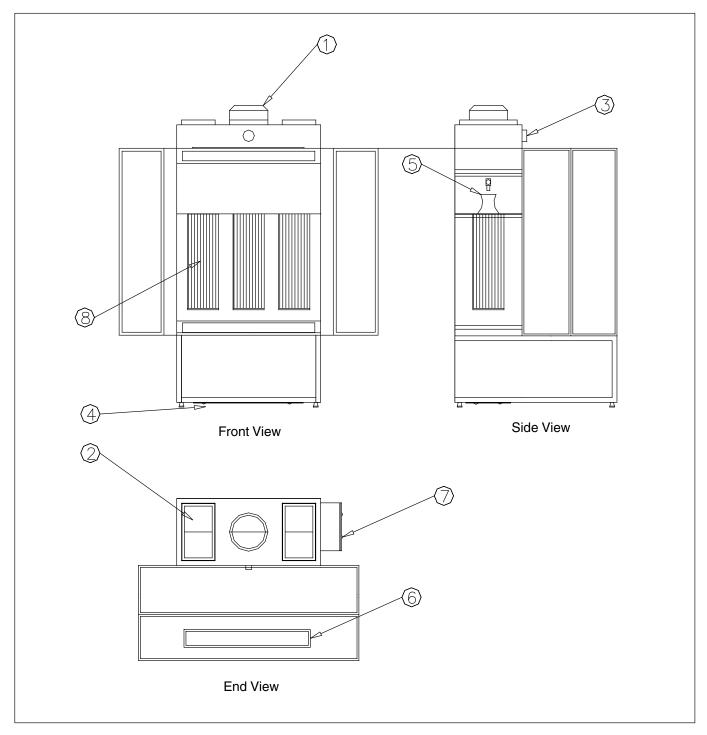
MicroMax 2 Illustration



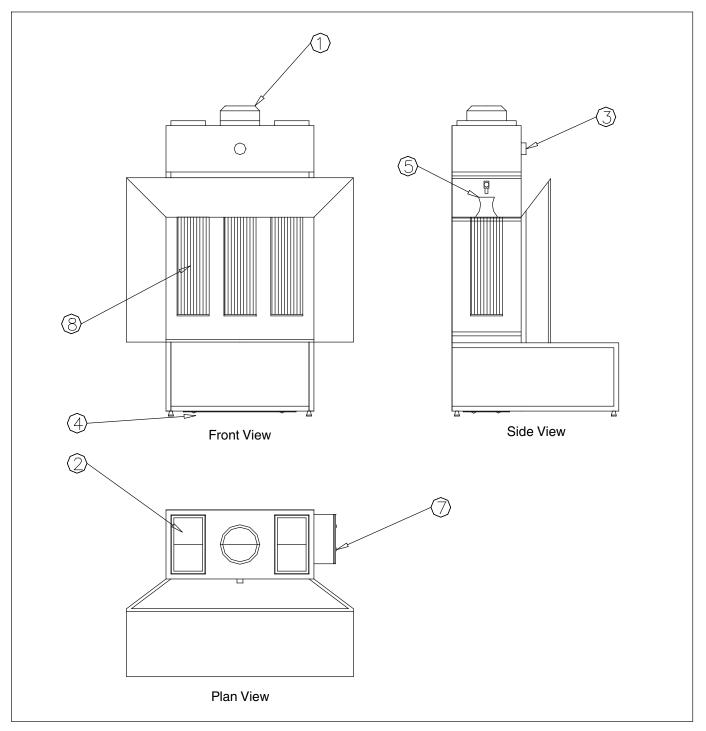
MicroMax 3/3A & 17 Illustration



MicroMax 4 Illustration



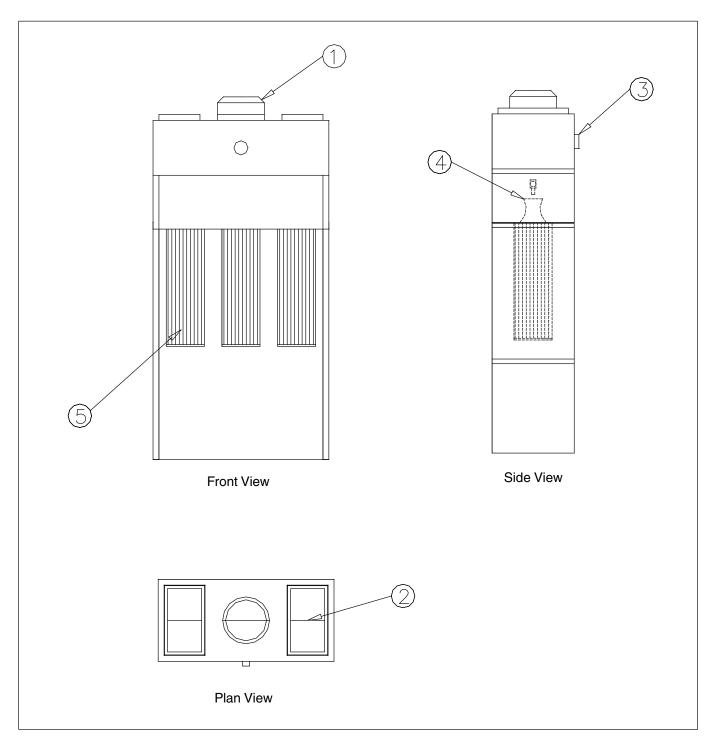
MicroMax 5 Illustration



2. Parts List MicroMax 1 - 5 and 17

Item	Part	Part Description			
-	768 750	MicroMax-1 Booth Assembly	1		
-	768 776	MicroMax-X -1 Booth Assembly, c/w Auto Pulsing	1		
-	768 751	/licroMax-2 Booth Assembly			
-	768 777	AicroMax-X -2 Booth Assembly, c/w Auto Pulsing 1			
-	768 752	MicroMax-3 Booth Assembly	1		
-	768 778	MicroMax-X -3 Booth Assembly, c/w Auto Pulsing	1		
-	768 774	MicroMax-3A Booth Assembly	1		
-	768 779	MicroMax-X -3A Booth Assembly, c/w Auto Pulsing	1		
-	768 753	MicroMax-4 Booth Assembly	1		
-	768 780	MicroMax-X -4 Booth Assembly, c/w Auto Pulsing	1		
-	768 758	MicroMax-5 Booth Assembly	1		
-	768 781	MicroMax-X -5 Booth Assembly, c/w Auto Pulsing	1		
-	768 775	MicroMax-17 Booth Assembly	1		
-	768 793	MicroMax-X -17 Booth Assembly, c/w Auto Pulsing	1		
1		Fan Assembly			
2	768 733	 PRE FILTER, 2M WIDE * REQUIRED LENGTH /M 	AR		
3	768 769	Air Pressure Switch	AR		
4	768 754	Hopper with sieve, MicroMax	AR		
5	768 770	Cartridge Mounting	AR		
6		Light, fluorescent	AR		
7		Control panel			
8	768 755	Filter, Cartridge, MicroMax	NOTE A		
M M	icroMax 2,4 and icroMax 3 and 3	ins 2 x Filter Cartridges, 5 contains 3 x Filter Cartridges A contains 6 x Filter Cartridges ains 8 x Filter Cartridges			
B: N	licroMax X Rang	ge is identical to the standard, except Individual Auto Pulsing is fitted as S	tandard		
AR: As Req	uired				
		Continue	ed on next page		

MicroMax 6 Module Illustration (Used on MicroMax 7-16)

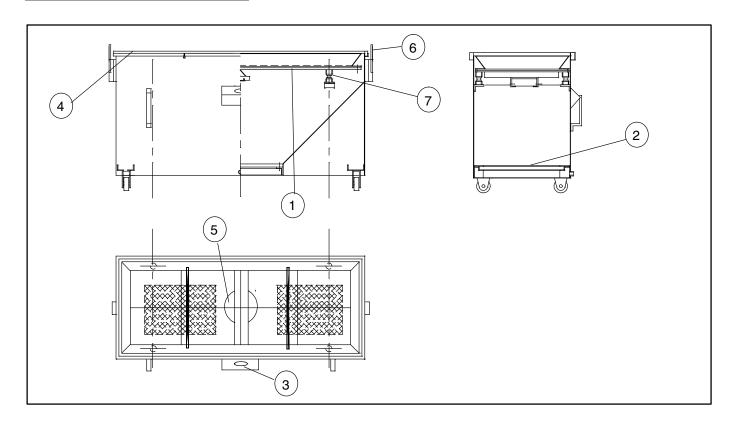


3. Parts List MicroMax 7 - 16

Item	Part	Description	Quantity		
-	768 771	MicroMax-6 Module Assembly, c/w Control Panel	1		
-	768 782	MicroMax-X-6 Booth Assembly, c/w Auto Pulsing & Control Panel	1		
-	768 759	MicroMax-7 Booth Assembly	1		
-	768 783	MicroMax-X-7 Booth Assembly, c/w Auto Pulsing	1		
-	768 794	icroMax-7A Booth Assembly			
-	768 795	MicroMax-X-7A Booth Assembly, c/w Auto Pulsing	1		
-	768 760	MicroMax-8 Booth Assembly	1		
-	768 784	MicroMax-X-8 Booth Assembly, c/w Auto Pulsing	1		
-	768 761	MicroMax-9 Booth Assembly	1		
-	768 785	MicroMax-X-9 Booth Assembly, c/w Auto Pulsing	1		
-	768 762	MicroMax-10 Booth Assembly	1		
-	768 786	MicroMax-X-10 Booth Assembly, c/w Auto Pulsing	1		
-	768 763	MicroMax-11 Booth Assembly	1		
-	768 787	MicroMax-X-11 Booth Assembly, c/w Auto Pulsing	1		
-	768 764	MicroMax-12 Booth Assembly	1		
-	768 788	MicroMax-X-12 Booth Assembly, c/w Auto Pulsing	1		
-	768 765	MicroMax-13 Booth Assembly	1		
-	768 789	MicroMax-X-13 Booth Assembly, c/w Auto Pulsing	1		
-	768 766	MicroMax-14 Booth Assembly	1		
-	768 790	MicroMax-X-14 Booth Assembly, c/w Auto Pulsing	1		
-	768 767	MicroMax-15 Booth Assembly	1		
-	768 791	MicroMax-X-15 Booth Assembly, c/w Auto Pulsing	1		
-	768 768	MicroMax-16 Booth Assembly	1		
-	768 792	MicroMax-X-16 Booth Assembly, c/w Auto Pulsing	1		
1		Fan Assembly	1		
2	768 757	Filter, emergency MicroMax	2		
3	768 769	Air Pressure Switch	1		
4	768 770	Cartridge Mounting	1		
5	768 755	Filter, MicroMax	NOTE A		
Mi Mi Mi	croMax 8, 9 an croMax 11, 12 croMax 14, 15	I 7A contains 3 x Filter Cartridges d 10 contains 6 x Filter Cartridges and 13 contains 9 x Filter Cartridges and 16 contains 12 x Filter Cartridges ge is identical to the standard, except Individual Auto Pulsing is fitted as S	Standard		
		· · ·	ued on next page		

4. MicroMax Sieve Hopper

Only available for MicroMax 1 - 5 & 17



Item	Part	Description	Quantity	
-	768 754	Hopper with sieve, MicroMax	NOTE A	
1	768 732	Sieve frame, MicroMax	1	
2	768 729	Fluid bed, MicroMax	1	
3	163 556	Mount, pump (Not Included)	1	
4	768 731	Seal, Sieve, MicroMax	3m	
5	768 756	Vibrator, MicroMax	1	
NS	376 507	Kit, Vibrator Repair, MicroMax	1	
6	768 730	Clamp, hopper, MicroMax	2	
7	768 727	Mount, sieve MicroMax	4	
NOTE A: Si	NOTE A: Sieve Hopper is only available for use on MicroMax 1 - 5 plus 17 only			

Section 8

Specifications

Section 8 Specifications

1. Electrical

	Micro 1	Micro 2	Micro 3/3A	Micro 4	Micro 5
Power (kW)	1.5	2.2	2 x 2.2	2.2	2.2
M3/hr	3000	5600	11200	5600	5600
	Micro 6	Micro 7/7A	Micro 8	Micro 9	Micro 10
Power (kW)	2.2	2.2	2 x 2.2	2 x 2.2	2 x 2.2
M3/hr	5600	5600	11200	11200	11200
	Micro 11	Micro 12	Micro 13	Micro 14	Micro 15
Power (kW)	3 x 2.2	3 x 2.2	3 x 2.2	4 x 2.2	4 x 2.2
M3/hr	16800	16800	16800	22400	22400
	Micro 16	Micro 17			
Power (kW)	4 x 2.2	2 x 7.5			
M3/hr	22400	24480			

NOTE: All booths work at 380/415 Volts at 50 Hz. Electrical Schematic Drawings should be located inside the control panel.

NOTE: All specification above are identical for the MicroMax-X range of Booths

2. Weights

	Micro 1	Micro 2	Micro 3/3A	Micro 4	Micro 5
Weight (kg) approx. shipping	450	700	1600	700	650
	Micro 6	Micro 7/7A	Micro 8	Micro 9	Micro 10
Weight (kg) approx. shipping	300	450	1400	1700	1700
	Micro 11	Micro 12	Micro 13	Micro 14	Micro 15
Weight (kg) approx. shipping	2100	2100	2000	2500	2500
	Micro 16	Micro 17			
Weight (kg) approx. shipping	2500	2500			

The weights above do not include the control panel.

NOTE: All weight specification above are identical for the MicroMax-X range of Booths

3. Noise

Measured at a distance of 1m from the surface of the unit and at a height of 1.6 m <80 dBA.

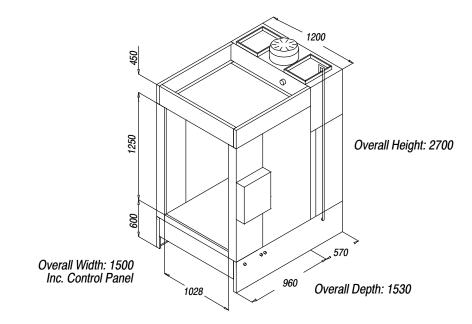
4. Pneumatic Supply

The air supply for the powder spray booth shall be

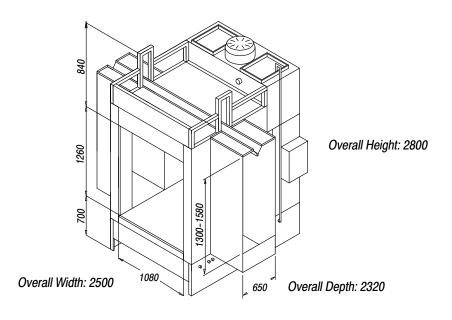
- 2 °C dewpoint, oil free air
- Clean and dry filtered to 5μ .
- 1/2" BSP at approx. 10 scfm per module

At a maximum supply pressure of 6.5 bar.

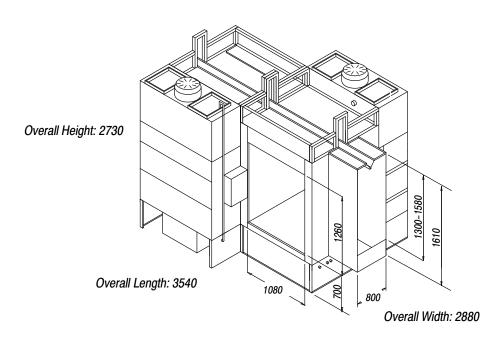
5. MicroMax 1 & X-1 Dimensions



6. MicroMax 2 & X-2 Dimensions

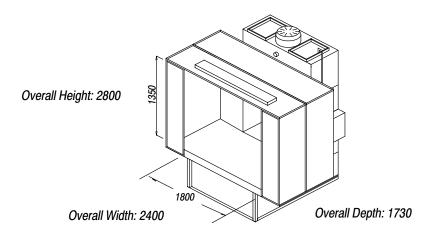


7. MicroMax 3/3A & X-3/3A Dimensions

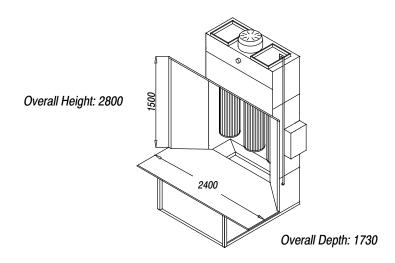


NOTE: MicroMax 3A has the same opening Dimensions, but the booth roof is 260mm Higher.

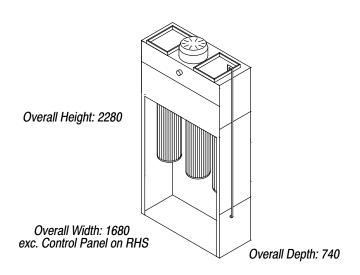
8. MicroMax 4 & X-4 Dimensions



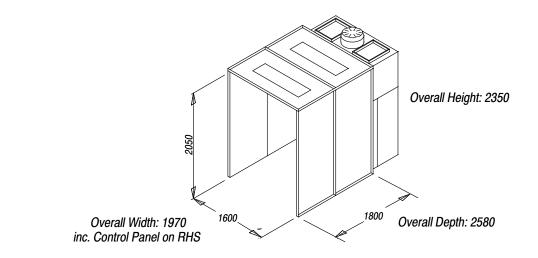
9. MicroMax 5 & X-5 Dimensions



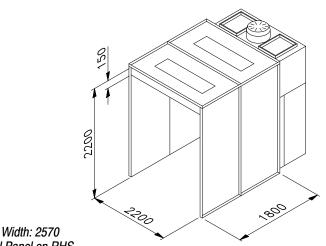
10. MicroMax 6 & X-6 Module Dimensions



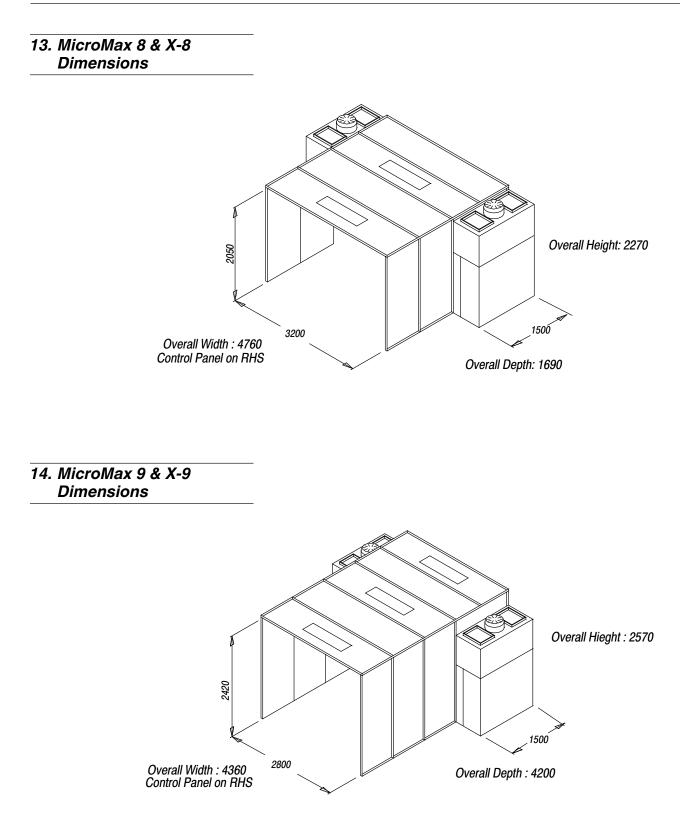
11. MicroMax 7 & X-7 Dimensions



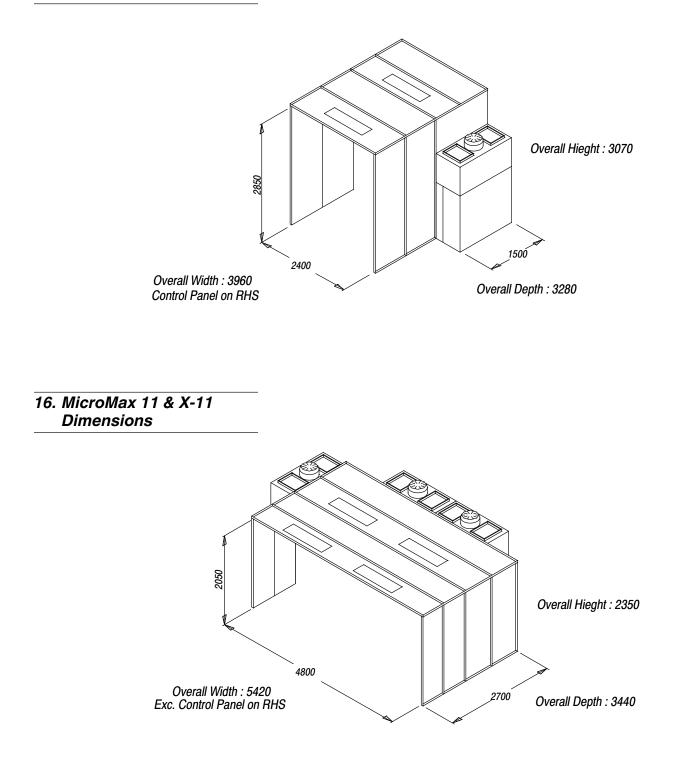
12. MicroMax 7A & X-7A Dimensions



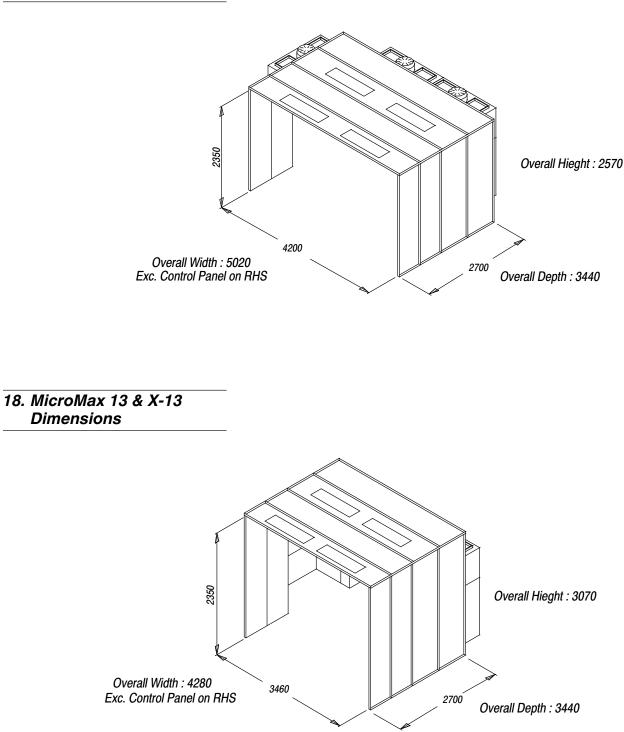
Overall Width: 2570 inc. Control Panel on RHS



15. MicroMax 10 & X-10 Dimensions







19. MicroMax 14 & X-14 Dimensions

