Airflow is a modern, technically advanced company, which after three decades is now at the forefront of its field. The company is dedicated to providing unrivalled finishing solutions. Airflow’s products include a comprehensive range of pre-treatment plant, dry filter and water wash spray booths, spray rooms, powder coating plants, batch ovens, conveyor ovens and complete turnkey product finishing solutions.
PRODUCT FINISHING - INTRODUCTION

The safe and environmentally responsible application of powders, wet paints or lacquers are all covered within the Airflow range of spray booths and powder coating booths. Modular components extend the versatility of the dry filter and water wash spray booths enabling them to be incorporated into controlled environment enclosures or spray rooms as they are more traditionally referred to. Heated air replacement units complete the controlled environment picture, providing clean, dry heated air for the benefit of both the product and the operator.

Airflow are able to supply a complete range of application equipment ranging from a simple HVLP (High Volume Low Pressure) hand held wet paint spray gun through fully automated recalculating online paint systems to automatic reciprocators with multiple powder guns and automatic product sensing. All application equipment supplied by Airflow is backed by local service support on a worldwide scale.

Completing the finishing picture are our world-renowned batch ovens and conveyor ovens. Standard proven ranges of box ovens are ideally suited to wet paint or lacquer finishing applications whilst our new range of HVLP powder ovens lead the market in unrivalled temperature control whilst preventing the blow off of electro-statically applied coatings prior to the curing taking place.

The complete Airflow finishing solution includes mechanical handling equipment, conveyors, paint mixing rooms, product stands, racks, jigs, turntables and a complete range of consumable items including, filters, spares, commissioning, certification, accreditation, planned preventative maintenance, and 24 hour service back up.

Airflow has more than 30,000 ft² of modern manufacturing space; using the latest 3D design software and process simulations we are able to design the perfect solution for your requirements. Using precision CNC machinery and quality control to ISO 9001 excellence is a standard feature of every Airflow product.
Hundreds of existing satisfied customers choose Airflow Finishing equipment to apply the all-important perfect finish to their products. Every perfect finish starts with meticulous preparation and a spray pre-treatment line or dip pre-treatment plant provides all the benefits of a correctly applied conversion coating. Utilising iron phosphate, zink phosphate or our highly energy efficient zirconium coatings, excellent adhesion and corrosion resistance are guaranteed. Our full portfolio of product finishing options include the following:

**PRODUCT FINISHING - STANDARD RANGE 2.2-6.6m**

- Airflow Flowclean pre-treatment plant
- 2.2m to 6.6m Airflow Easybuild dry filter spray booths
- 2.2m to 6.6m Airflow Highflow water wash spray booths
- 1.1m deep canopy to chosen width from our range
- 1.1m deep extract chamber to chosen width from our range
- Airflow cartridge fan, with 3 phase, 415v, 50Hz, non-flameproof motor
- Telemecanique non-flameproof DOL (direct on line) starter
- First fill of filter standard concertina filter paper
- Supplied flat pack and palletised
- Full and detailed assembly, installation and maintenance instructions

Additionally costed elements include:

- Lighting - Both canopy roof or side panels is available
- Forward canopy - Extension & canopy dividers
- Filter media options - Including high efficiency paper or open weave
- Motor options - Include 240v single phase, non-flameproof or 415v, 3 phase flameproof motors as alternatives to standard
- Ducting kits - A range of options are available for wall or roof extract, please see below for more details

**OVERVIEW**

**PRE TREATMENT PLANT & EQUIPMENT**

- **DRY FILTER SPRAY BOOTHS**
- **WATER WASH SPRAY BOOTHS**
- **POWDER SPRAY BOOTHS**
- **SPRAY ROOMS**
- **AUTOMOTIVE SPRAY ROOMS**
OveRvIew

PRE-TREATMENT PLANT & EQUIPMENT

The latest generation of pre-treatment systems available
All stainless steel construction including tanks and pumps
Superior cleaning at lower temperatures
Reduced energy consumption means increased profits
Optimised plant operation and improved finished product quality
Improved operator environment
Ease of use for operators
Improved conversion coatings on multi-metal substrates
Improved ROI (return on investment)
Reduced servicing
Equipment longevity
Controlled and predictable energy costs

OVERVIEW

Any finish, no matter how expertly applied is wasted unless applied to a clean, pre-treated surface. Our pre-treatment and cleaning products are designed around the latest environmentally friendly aqueous based solutions. Our extensive range of three and five tank dip systems provides a perfect upgrade from a vapour degreaser, combining superior cleaning with phosphated finish.

Multistage conveyorised spray pre treatment lines have been manufactured by Airflow for many years. Our wealth of experience combined with the latest chemicals and plant design results in our ability to supply the very best high volume, multistage plants. Our plants will run on zinc phosphate, iron phosphate or zirconium phosphate providing conversion coatings on steel, aluminium or zinc. Whatever your pre treatment requirements, you should be discussing them with one of our engineers.

We can also provide complete eco-system designs and installs. With 30 plus years experience in the industrial oven marketplace our know-how is unrivalled. Our knowledge of these booths and their application in the UK and within our vibrant export market gives Airflow the authority to advise from position of experience. You can be assured that our products will be manufactured and installed to the highest standards being ATEX and ISO 9001 accredited.
OVERVIEW

Strength, durability and engineering quality, feature in every single Airflow dry filter spray booth. Modular design and CNC manufacture ensures strictly competitive pricing. The patented Airflow cartridge fan ensures that fan-motor and drive components are sealed away from the exhaust air stream, for a long trouble free life. Booths can be supplied with a choice of standard or ATEX fans.

To compliment your dry filter spray booth Airflow has over 30 years system design and installation experience. Our internal design and manufacturing teams have been developing solutions for the worlds top companies since 1985 and now offer unparalleled expertise within the finishing industry. Airflow has unrivalled knowledge of oven applications within your market. Our expertise within these areas allows us to knowledgeably advise on the correct ‘lifetime solution’ for your particular process.

All Airflow dry filter spray booths are designed to meet the latest European regulations and comply with HSG 178 - “The spraying of flammable liquids” and they carry the benefit of the CE mark if supply for usage within the UK and the European Union.
**DRY FILTER SPRAY BOOTHS - DUCTING OPTIONS**

Ducting options include a range of through roof and through wall configurations. This allows for total flexibility to ensure extraction using a combination of straight ducting, flanges, bend flanges and brackets to allow for exhaust to ventilate into the atmosphere.

We recommend the application of peelable coating to the inner face of the Booth canopy to simplify maintenance, reduce fire risk and prolong the life of the Booth. Consideration should be given for replacement air which, in volume should equal that being ventilated whilst fans are in operation. We can advise standard Airflow options for your installation and project.
### OVERVIEW

Airflow Water Wash Spray Booths have a unique modular design. Featuring a triple scrubbing action providing very high efficiency particulate removal. The patented Airflow cartridge fan ensures that fan-motor and drive components are sealed away from the exhaust air stream, for a long trouble free life. The standard booth is supplied pre-assembled at no extra cost and is available with a choice of motors.

Airflow recognise the pressures on businesses to be increasingly competitive and to find savings within competitive industries. The solution to this problem is not to choose an inferior spraybooth in order to reduce initial price, risking costly unreliability, but to specify an Airflow Spraybooth and optimise performance in terms of both reliability and long-term production costs.

Water Wash Spraybooths from Airflow – giving you, the customer the best quality Spraybooths at the most economic price. Airflow has developed the range of Water Wash Spraybooths that have all the quality and benefits expected from an Airflow Booth, but have been designed for easy installation to reduce costs.

### WATER WASH SPRAY BOOTH SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modular design allowing for most types of spraying application</td>
</tr>
<tr>
<td>An epoxy-coated seam welded one piece water tank</td>
</tr>
<tr>
<td>Pre-assembled and tested at no extra cost</td>
</tr>
<tr>
<td>Heavy duty welded and screwed pipework with externally mounted gate valve</td>
</tr>
<tr>
<td>Full width stainless steel water screen</td>
</tr>
<tr>
<td>Pump set with stainless steel impeller and tungsten carbide seal</td>
</tr>
<tr>
<td>2mm mild steel fully welded and two-coat epoxy painted tank</td>
</tr>
<tr>
<td>High pressure water jets act against the extracted air flow to provide a highly efficient cleaning action</td>
</tr>
<tr>
<td>Standard canopy height of 2.2 metres means more headroom and space for hanging bars or tall products</td>
</tr>
<tr>
<td>The Airflow Patented Cartridge Fan for total reliability</td>
</tr>
<tr>
<td>An externally accessible water flow control valve</td>
</tr>
<tr>
<td>Stainless steel water screens as standard</td>
</tr>
<tr>
<td>Selected for quality and reliability by the world’s leading manufacturers</td>
</tr>
<tr>
<td>Automated sludge removal options</td>
</tr>
</tbody>
</table>

### WATER WASH SPRAY BOOTH LEGISLATION

- Additional cost options
- Legislation

### WATER WASH SPRAY BOOTH QUALITY

- Quality
- Reliability

### WATER WASH - ADDITIONAL COST OPTIONS
WATER WASH SPRAY BOOTHs - QUALITY

Airflow Water Wash Spray Booths are designed to give the highest standards of quality and operating reliability. Airflow only uses the highest quality heavy-duty 1.2mm galvanised sheets which are formed with 50mm returns to give individual panels and the overall booth strength and rigidity. This is achieved by an industry unique overlapping panel construction design. Each panel is individually designed and CNC punched to +/- 0.1mm accuracy which means the water wash booth fits together solidly, quickly and accurately with the minimum of fixings required. The Airflow Booth is solid and free-standing with smooth internal faces which assist cleaning. Airflow supply as standard the highest quality lock formed ducting in kit form for ease of installation. Airflow Booths have a quality look and finish which complements any factory environment. A water wash spray booth includes:

- 1.1m deep canopy to chosen width
- 1.15m washing chamber to chosen width
- Airflow patented cartridge fan, with 3-phase, 415V, 50Hz, non-flameproof motor
- Telemecanique non-flameproof DOL starters
- Washing chamber supplied fully assembled
- Full and detailed installation and maintenance instructions
WATER WASH - ADDITIONAL COST OPTIONS

- Lighting - for both canopy roof or side panels is available
- Forward canopy extension - to increase the effective working depth by 1.1 metre increments
- Canopy Divider to create multiple work stations within one booth
- Ducting Kits - a range of options are available for wall or roof extract, please see schedule for details

WATER WASH SPRAY BOOTH LEGISLATION

Airflow Booths provide an air velocity through the booth that meets and surpasses the requirement of HSG178. Airflow fans are legal and comply with the machinery directive (89/392/EEC). Technical files and risk assessments are held at Airflow to ensure our and your compliance with legislation. To compliment your water wash spray booth, Airflow has over 35 years system design and installation experience. Our internal design and manufacturing teams have been developing solutions for the world’s best companies since 1985 and now offer unparalleled expertise within the finishing industry. We also have an unrivalled knowledge of oven applications within your market. Our expertise within these areas allows us to knowledgeably advise on the correct ‘lifetime solution’ for your particular process.
**FAST COLOUR CHANGE POWDER SPRAY BOOTH**

- Complete, functional, fast colour change package
- Tested and prequalified manufacturing quality
- Can be seen in Nordsons Erkrath demonstration centre
- To be sold exclusively with Nordson powder spray systems
- Spray system and gun mover packages ordered directly from Nordson
- Installation by experienced engineers

**OVERVIEW**

Airflow offers a comprehensive solution for the rapid powder coating and product finishing of a wide range of manufactured finished goods, parts and components. The fast colour change powder spray system is optimised for efficient, repeatable powder application. Numerous features minimise powder in process and aid in system cleaning providing you with a fast, contamination free colour change.

**SYSTEM SPECIFICATIONS (& SIZES)**

**DOUBLE SKIN PVC UPPER STRUCTURE**

**BOOTH BASE**

**MONO-CYCLONE POWDER RECOVERY WITH SIEVE**

**AFTER FILTER**

**OPTIONS / EXTRA**

**SAMPLE SYSTEM DRAWING**

**BACK**
FAST COLOUR CHANGE POWDER SPRAY BOOTH

SYSTEM SPECIFICATIONS (& SIZES)

- Up to 12 automatic and 2 manual spray systems
- Up to 3 automatic gun slots per booth side
- Double skin PVC upper structure
- Single skin PVC roof
- PVC Floor (20 mm)
- Stainless steel manual platform floor
- Single extraction slot in the middle of the booth
- Automatic floor blow-off
- Standard product opening sizes

<table>
<thead>
<tr>
<th>BOOTH SIZE (HxW)</th>
<th>AFTERFILTER SIZE m³/hr</th>
<th>MOTOR</th>
<th>FILTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1300 x 700</td>
<td>12,500 to 14,000</td>
<td>2 x 11 kW</td>
<td>15</td>
</tr>
<tr>
<td>1300 x 1000</td>
<td>16,000 to 18,000</td>
<td>2 x 15 kW</td>
<td>18</td>
</tr>
<tr>
<td>1600 x 700</td>
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<td>18</td>
</tr>
<tr>
<td>2400 x 1000</td>
<td>20,000 to 23,000</td>
<td>2 x 18.5 kW</td>
<td>21</td>
</tr>
</tbody>
</table>
FAST COLOUR CHANGE POWDER SPRAY BOOTH

DOUBLE SKIN PVC UPPER STRUCTURE

- 3 auto slots per side
- One 2 m blow-off lance
- Sandwich wall construction
- Single-skin, 10 mm roof
- 100 mm conveyor opening (can be cut wider onsite if necessary)
- 3 roof support brackets
- 2 cut-outs for convenient manual gun placement
- 6 lights – both auto and manual sections of the booth
- Auto gun slots spacing – 300 mm

BOOTH BASE

- Single-slot extraction
- Automatic floor blow-off
- Metal structure painted blue smooth finish
- Base covered with cover plates
- Floor – 20 mm PVC in dark grey
- Manual platforms with steps and hand rails
- Stainless surface on manual stations
- Base covers on manual platforms

BACK
FAST COLOUR CHANGE POWDER SPRAY BOOTH

MONO-CYCLONE POWDER RECOVERY WITH SIEVE

Mono cyclone design with tested 96% efficiency
Integrated vibratory sieve – 500 µm screen mesh
Two handed safe pneumatic open/closing of the surge hopper for cleaning
Nordson HDLV high capacity pump station for powder transfer with manual controls for operation and cleaning

AFTERFILTER

Various sizes
Waste buckets for powder removal
Ductwork from the afterfilter to the booth and feed centre
2 explosion vents supplied as standard venting upward
(A safety zone around the unit is required and communicated to the end user)
Reverse pulse filter cleaning.
STS fire detection and suppression system to be sourced locally if required

<table>
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<th>BOOTH SIZE (HxW)</th>
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</tr>
</tbody>
</table>
FAST COLOUR CHANGE POWDER SPRAY BOOTH

OPTIONAL POWDER FEED SYSTEM AND HOPPER

Ventilated enclosure connected to the afterfilter for safe and clean operating
Powder feed from fluidised hopper for consistent delivery rates and easy powder addition
Pneumatically operated, easy to clean pick-up tubes
Automatic internal spray system purge
Convenient inlet for recycled powder return to the hopper
Easy to operate controls
Integrated dust-proof lights
Includes one powder feed hopper
Solid-plate pick-up tubes facilitate cleaning during colour change

OPTIONAL EXTERNAL GUN CLEANING

External gun blow-off nozzles
The cleaning process is activated via a switch on the main control panel and the guns are manually extracted by pulling the gun mover on its guide rails.
FAST COLOUR CHANGE POWDER SPRAY BOOTH

SAMPLE SYSTEM DRAWING
**OVERVIEW**

For high quality paint spray facilities we provide an initial audit on all controlled environment enclosures within your operation. We have many examples of installations providing complete solutions of product finishing outputs and quality control.

**PAINT SPRAY ROOM TYPES**

- Modular design allowing for all types of spraying application
- Patented ‘Cartridge Fan’ ensures reliable, uninterrupted production
- Huge stocks of component parts ensure rapid lead times
- Superior overspray collection maximises environmental compliance
- Designed and manufactured for harsh industrial environments
- Galvanised steel or stainless steel construction available
- Designed for rapid filter changes and minimum maintenance downtime
- Securely site assembled using our unique time saving designs
- CNC production with assembly alignment to within 0.1mm

Airflow offers specification, design, manufacture and installation of both specialised and standardised paint spray room operations. Standard paint spray booths are available ex-stock. Our expertise in specialised applications which may require higher efficiencies or controlled environments is unrivalled. We differentiate our bespoke product range from standard installations where the cleanliness of the paint spraying environment is highly critical.

- The drying of solvent based paints benefits from good and controlled air circulation, which can be achieved by a dedicated flash off room. The flash off room incorporates a low level of air circulation and extraction that both assists the drying process and exhausts the hazardous solvent fumes safely. Additional benefits of a dedicated flash off room are that it frees up the spray area for further production. It also enables a quality finish to be achieved in a reduced time frame.

- Certain paints and lacquers need or benefit from being dried/cured at fixed temperatures so as to achieve the film-flow effect that ensures complete and even coverage of the surface. Batch finishing production times can be substantially reduced by drying the products in a dedicated room as opposed to letting them dry under the ambient conditions that exist in the work place. Controlled drying ensures the optimum surface finish and greatly reduces the risk of ‘blooming’ and ‘crazing’.
Airflow can produce and provide either a simple room from its extensive range of standard product modules or tailor-make a drying facility to suit your particular requirements. Should heating be required, then this can be achieved either by the use of direct or indirect fired gas or LPG, with electrical heating or indirect oil firing as options for the above types of industrial spray room.

To compliment your spray room Airflow has over 35 years system design and installation experience. Our internal design and manufacturing teams have been developing solutions for the world’s leading companies since 1985 and now offer unparalleled expertise within the finishing industry. We also have an unrivalled knowledge of oven applications within many markets. Our expertise within these areas allows us to knowledgeably advise on the correct ‘lifetime solution’ for any particular process.

Our Airflow paint spray room solutions can also include mechanical handling equipment, conveyors, paint mixing rooms, product stands, racks, jigs, turntables and a complete range of consumable items including, filters, spares, commissioning, certification, accreditation, planned preventative maintenance, and 24 hour service back up.
PAINT SPRAY ROOMS

SAMPLE SYSTEM DRAWING
<table>
<thead>
<tr>
<th><strong>OLYMPIAN</strong></th>
<th><strong>SPARTAN</strong></th>
<th><strong>POSEIDON</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget Rear Extraction</td>
<td>Premium Rear Extraction or Downdraught</td>
<td>High Specification Full Downdraught</td>
</tr>
<tr>
<td>Low to Mid Throughput</td>
<td>Mid to High Throughput</td>
<td>High Throughput</td>
</tr>
<tr>
<td>14,000m³/hr</td>
<td>20,000m³/hr</td>
<td>30,000m³/hr</td>
</tr>
<tr>
<td>3.5 Air Changes per Minute</td>
<td>5 Air Changes per Minute</td>
<td>7 Air Changes per Minute</td>
</tr>
<tr>
<td>Single Air Input Plenum (7.5m²)</td>
<td>Twin Air Input Plenum (15m²)</td>
<td>Full Air Input Plenum (32m²)</td>
</tr>
<tr>
<td>3.0kW Bifurcated Axial Fans</td>
<td>4.0kW Aerofoil Centrifugal Fans</td>
<td>7.5kW Aerofoil Centrifugal Fans</td>
</tr>
<tr>
<td>Variable Speed Drive Motor Control</td>
<td>Variable Speed Drive Motor Control</td>
<td>Variable Speed Drive Motor Control</td>
</tr>
<tr>
<td>110kW Direct Fired Gas (300,000btu’s)</td>
<td>170kW Direct Fired Gas (300,000btu’s)</td>
<td>220kW Direct Fired Gas (600,000btu’s)</td>
</tr>
<tr>
<td>High/Low Two Stage Temperature Control</td>
<td>High/Low Two Stage Temperature Control</td>
<td>Modulating Temperature Control</td>
</tr>
<tr>
<td>1000 lux High Level T5 Lighting</td>
<td>1700 lux High Level LED Lighting</td>
<td>Automatic Cabin Pressure Regulation</td>
</tr>
<tr>
<td>Twin Leaf Main Doors</td>
<td>Three Leaf Concertina Main Doors</td>
<td>I700 Lux High Level LED Lighting</td>
</tr>
<tr>
<td>Standard Push Button Control Panel</td>
<td>PLC Push Button Control Panel</td>
<td>Three Leaf Concertina Main Doors</td>
</tr>
<tr>
<td><strong>BACK</strong></td>
<td><strong>HYDRA-CUR® WATER BASED CURING SYSTEM</strong></td>
<td><strong>Hydracure™ Water Based Curing System</strong></td>
</tr>
<tr>
<td><strong>Energy Save Idle Mode</strong></td>
<td><strong>PLC Control Panel with Colour Touchscreen</strong></td>
<td><strong>Energy Save Idle Mode</strong></td>
</tr>
</tbody>
</table>
The Todd Engineering Olympian 1000 series spray booth sets high standards in price and performance for the budget entry level, new start-up and low throughput markets. The spray booth is compatible for waterborne paints and the Olympian’s low cost and streamline installation makes it a competitive and far less risky option against the purchase of a second hand spray booth. Contrary to its low cost, the Olympian’s cabin is to full specification in terms of size, construction & finish. The air handling plant is designed to be compact & to be accessible for easy routine maintenance. The airflow design provides for a good throughflow of air for the removal of paint overspray & vapours without the need for excavation, floor grids, etc. This makes installation very quick and easy.
CONSTRUCTION
The spray booth cabin is constructed using double skinned insulated panels with white polyester front and doors, white polyester internal finishes, the remainder of the cabin is finished in galvanised steel.

FLOOR ARRANGEMENT - LAYOUT
The booth is a rear extraction type spray booth that requires no additional ground works prior to installation. The machine is simply constructed on a smooth, flat concrete base with an extraction chest at the rear and plant work situated on top.

This provides a front to rear, diagonally flowing tunnel of air which moves across the entire vehicle to carry away overspray and fumes.

AIR FILTRATION
The plant work is fitted with two 3.0kW direct drive axial fans to achieve the design airflow rate of 14,000 m³/hr. This provides a rate of 3.5 air changes per minute within the cabin, with extracted air being exhausted to atmosphere. The extraction system is fitted with two-stage filtration using 50mm EU2 green paint stop and EU3 blue pre-filters, this ensures that emissions meet EPA requirements. The input system uses high quality EU5 filter media to ensure incoming air is free of contaminants.

LIGHTING
The interior cabin is well lit with high level corner mounted light pods which are angled to reduce glare and shadowing, these pods are outfitted with an energy efficient T5 lighting system that gives illumination in excess of 1000 lux levels.

SPRAYING CYCLE
Fresh air is drawn from atmosphere & is heated to the required temperature. It then passes through EU5 ceiling filters into the booth & over the vehicle carrying away paint overspray & vapours. The air is extracted via a twin dry filter system & exhausted to atmosphere. By using recommended filters with regular changes, 99% of pollutants can be captured.

HEATING - BAKE CYCLE
Fresh air is drawn from atmosphere & is heated to the required temperature. It then passes through EU5 ceiling filters into the booth & over the vehicle carrying away paint overspray & vapours. The air is extracted via a twin dry filter system & exhausted to atmosphere. By using recommended filters with regular changes, 99% of pollutants can be captured.
NOISE LEVELS

Comfortable working cabin levels of between 70-75 dB, variable speed motors contribute to 50% lower dB outbreak levels.

DOORS

The main vehicle entry doors are constructed from double skinned white polyester steel. They are insulated with white steel trims and hung with white aluminium hinges. They are constructed in a twin-leaf format, with a central locking mechanism complete with toughened window glass. A rubber compression seal within the door frame ensures a secure seal when the doors are closed.

It is a legal requirement to have a secondary means of escape. A personnel door may be fitted in any wall panel, generally to the rear of the cabin to provide a safe fire escape route. The door construction is similar to the single leaf of the main door (30 minutes fire resistance), fitted with door closer, catches & full length window. The door is fitted with compression seals and opens outwards.

CONTROL PANEL

The control panel, which is fitted with variable speed drives to electronically balance the cabin pressure, provides operating cycle selection for spray & bake modes, automatic bake timing with cool-down facility, lighting control, dual temperature controller readout for spray and bake cycles, magnehelic pressure monitoring with positive pressure alarm and emergency pressure alarm and shutdown. The standard power requirements are three phase 32A, 400 volt, 50Hz + Neutral. This booth will also operate on single phase.
The Hydracure™ water based curing system can improve curing times of water based paints by up to 40% compared to conventional booths without the system. Hydracure™ uses adjustable high pressure nozzles mounted down the side walls of the spraybooth cabin to focus heated jets of air at the painted surface, this air ‘agitation’ effect allows the water content to be ‘pushed’ from the paint. The system uses two 1.1kW centrifugal fans to draw heated air from the ‘clean zone’ within the cabin, this air is then filtered to ensure clean operation to 10 microns. The Hydracure™ system comes complete with a dedicated control panel and is available as an optional extra.

**BOOTH DIMENSIONS**

**2500 MODEL**

<table>
<thead>
<tr>
<th>Interior Height</th>
<th>2600mm</th>
<th>Overall Height</th>
<th>3000mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior Width</td>
<td>4000mm</td>
<td>Overall Width</td>
<td>4100mm</td>
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<tr>
<td>Interior Length</td>
<td>6900mm</td>
<td>Overall Length</td>
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**2900 MODEL**

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<th>Overall Height</th>
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<tr>
<td>Interior Width</td>
<td>4000mm</td>
<td>Overall Width</td>
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<tr>
<td>Interior Length</td>
<td>7900mm</td>
<td>Overall Length</td>
<td>8910mm</td>
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</tbody>
</table>
The Todd Engineering Spartan 2000 series spray booth is a premium rear extract type spray booth offering high levels of performance at an affordable price, ideally suited to applications with a medium to high throughput, the Spartan can be the workhorse of any bodyshop. The Spartan boasts a 20,000m³/hr airflow rate resulting in 5 air changes per minute, this is achieved using a highly efficient fan design and plant configuration, combined with energy efficient technology such as variable speed drives ensures that the unit is very economical to run.
The spray booth cabin is constructed using double skinned insulated panels with white polyester finish internally and externally.

The booth is a rear extraction type spray booth that requires no additional ground works prior to installation. The machine is simply constructed on a smooth, flat concrete base with an extraction chest at the rear and plant work situated on top. This provides a front to rear, diagonally flowing tunnel of air which moves across the entire vehicle to carry away over-spray and fumes.

The plant work is fitted with two 4.0kW direct drive aerofoil, backwards curved centrifugal fans to achieve the design airflow rate of 20,000m³/hr. This provides a rate of 5 air changes per minute within the cabin, with extracted air being exhausted to atmosphere. The extraction system is fitted with two-stage filtration using 50mm EU2 green paint stop and EU3 blue pre-filters, this ensures that emissions meet EPA requirements. The input system uses high quality EU5 filter media to ensure incoming air is free of contaminants down to 10 microns.

The interior cabin is well lit with high level corner mounted light pods which are angled to reduce glare and shadowing, these pods are outfitted with an energy efficient T5 lighting system that gives illumination in excess of 1500 lux levels.

Fresh air is drawn from atmosphere & is heated to the required temperature. It then passes through EU5 ceiling filters into the booth & over the vehicle carrying away paint over-spray & vapours. The air is extracted via a twin dry filter system & exhausted to atmosphere. By using recommended filters with regular changes, 99% of pollutants can be captured.

The spray booth is fitted with a direct fired natural gas/LPG burner with an output of 90-110kW or 300,000 Btu's/hr; this allows recirculated air to be rapidly heated to the preset temperature on the control panel. Alternatively, an indirect fired oil burner can be fitted.
NOISE LEVELS

Comfortable working cabin levels of between 70-75 dB, variable speed motors contribute to 50% lower dB outbreak levels.

DOORS

The main vehicle entry doors are constructed from double skinned white polyester steel, insulated with white steel trims and hung with white aluminium hinges. Constructed in a three-leaf format they open in a concertina fashion to minimise the opening distance. Two individual locking mechanisms allow one single leaf door to be used as an additional personnel door. Doors are fitted with a full length window to maximise visibility. A rubber compression seal within the frame ensures a secure seal when the doors are closed.

It is a legal requirement to have a secondary means of escape. A personnel door may be fitted in any wall panel, generally to the rear of the cabin to provide a safe fire escape route. The door construction is similar to the single leaf of the main door (30 minutes fire resistance), fitted with door closer, catches & full length window. The door is fitted with compression seals and opens outwards.

CONTROL PANEL

The state-of-the-art control panel, which is fitted with variable speed drives to electronically balance the cabin pressure, provides operating push button selection for spray & bake modes, automatic bake timing with readout & cool-down facility, lighting control, temperature controller readout for spray and bake cycles, clearance time safety interlocks, magnehelic pressure monitoring with positive pressure alarm, emergency pressure alarm and shutdown. The standard power requirements are three phase 32A, 400 volt, 50Hz + Neutral.
The Hydracure™ water based curing system can improve curing times of water based paints by up to 40% compared to conventional booths without the system. Hydracure™ uses adjustable high pressure nozzles mounted down the side walls of the spraybooth cabin to focus heated jets of air at the painted surface, this air ‘agitation’ effect allows the water content to be ‘pushed’ from the paint. The system uses two 1.1 kW centrifugal fans to draw heated air from the ‘clean zone’ within the cabin, this air is then filtered to ensure clean operation to 10 microns. The Hydracure™ system comes complete with a dedicated control panel and is available as an optional extra.

<table>
<thead>
<tr>
<th>BOOTH DIMENSIONS</th>
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<tr>
<td><strong>2600 MODEL</strong></td>
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<tr>
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| **3000 MODEL** |
| Interior Height | 3000mm | Overall Height | 3400mm |
| Interior Width | 3900mm | Overall Width | 4000mm |
| Interior Length | 7900mm | Overall Length | 9625mm |
The Poseidon 4000 Series Spray booths are a high specification, high performance range of machines designed to fulfil the needs of the most demanding bodyshops. The Poseidon utilises the latest technology available to achieve rapid and efficient process times, featuring Todd Engineering’s Hydracure water based curing system as standard. The Poseidon’s intelligent control system automatically regulates internal cabin temperature and pressure, this is coupled with a wealth of energy saving features that makes the Poseidon both economical and efficient to run.
CONSTRUCTION

The spray booth cabin is constructed using double skinned insulated panels with white polyester finish internally and externally.

FLOOR ARRANGEMENT - LAYOUT

The ‘Poseidon’ is a downdraught type spray booth which features extraction at floor level, through a fully filtered raised floor arrangement. The downdraught design ensures all over-spray and dirt is pulled immediately to floor level and held there during the spraying process, this eliminates over-spray contaminating other areas of the paintwork and ensures a perfect finish. The full size ceiling air input plenum helps facilitate this design by producing an even through flow of heated air that completely envelops the vehicle, meaning all areas of the car including sills are heated to the required panel temperature evenly for rapid curing.

AIR FILTRATION

The spray booth plant work is fitted with two 7.5kW direct drive aerofoil, backwards bladed centrifugal fans to achieve the design airflow rate of 35000m³/hr. This provides a rate of 7 air changes per minute within the cabin, with extracted air being exhausted to atmosphere. The extraction system is fitted with two stage filtration incorporating 50mm EU2 green paintstop and EU3 blue pre-filter; this ensures that emissions meet EPA requirements.

LIGHTING

The interior cabin is well lit with high and low level light pods which are angled to reduce glare and shadowing, these pods are outfitted with an energy efficient T5 lighting system that gives illumination in excess of 2000 lux levels.

SPRAYING CYCLE

Fresh air is drawn from atmosphere & is heated to the required temperature. It then passes through EU5 ceiling filters into the booth & over the vehicle carrying away paint over-spray & vapours. The air is extracted via a twin dry filter system & exhausted to atmosphere. By using recommended filters with regular changes, 99% of pollutants can be captured.

HEATING - BAKE CYCLE

The spray booth is fitted with a direct fired modulating natural gas/LPG burner with an output of 220kW or 600,000 Btu’s/hr; this allows recirculated air to be rapidly heated to the preset temperature on the control panel. Alternatively, an indirect fired oil burner can be fitted.
NOISE LEVELS

Comfortable working cabin levels of between 70-75 dB, variable speed motors contribute to 50% lower dB outbreak levels.

DOORS

The main vehicle entry doors are constructed from double skinned white polyester steel, insulated with white steel trims and hung with white aluminium hinges. They are constructed in a three-leaf format, opening in a concertina fashion to minimise the opening distance, two individual locking mechanisms allow one single leaf door to be used as an additional personnel door. Each door is fitted with a full length window to maximise visibility. A rubber compression seal within the door frame ensures a secure seal when the doors are closed.

It is a legal requirement to have a secondary means of escape. A personnel door may be fitted in any wall panel, generally to the rear of the cabin to provide a safe fire escape route. The door construction is similar to the single leaf of the main door (30 minutes fire resistance), fitted with door closer, catches & full length window. The door is fitted with compression seals and opens outwards.

CONTROL PANEL

A state-of-the-art control panel fitted with variable speed drives to electronically balance the cabin pressure. Operating push button selection for spray, hydracure & bake modes, automatic bake timing with readout & cool-down facility, lighting control, temperature controller readout for spray, hydracure and bake cycles, clearance time safety interlocks, magnehelic pressure monitoring with positive pressure alarm, emergency pressure alarm and shutdown. Standard power requirements are three phase 63A, 400 volt, 50Hz + Neutral.
The Hydracure™ water based curing system can improve curing times of water based paints by up to 40% compared to conventional booths without the system. Hydracure™ uses adjustable high pressure nozzels mounted down the side walls of the spraybooth cabin to focus heated jets of air at the painted surface, this air ‘agitation’ effect allows the water content to be ‘pushed’ from the paint. The system uses two 1.1kW centrifugal fans to draw heated air from the ‘clean zone’ within the cabin, this air is then filtered to ensure clean operation to 10 microns. The Hydracure™ system comes complete with a dedicated control panel and is available as an optional extra.

### BOOTH DIMENSIONS

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