

## Contact Sheet

### Client

#### Colourcube Automotive

8B Franklyn Court  
Greave House Terrace  
Lepton  
Fenay Bridge  
Huddersfield  
HD8 0GB

**Contact:** **Mike / Liz**

Telephone Number: **Redacted**

Mobile Number:

E Mail Address: **Redacted**

**Quotation Title:** **Dalby Genesis 'Q' Series Spraybooth/ Oven**

Quotation Reference: **Redacted** Issue: 5

Date of Quotation: 7<sup>th</sup> November 2025

### Dalby

Sales Manager: **Redacted**

Technical Queries:

Filter Sales:

Service & Maintenance:



### **Quality Management System**

- ◆ Dalby achieved certification to BS EN ISO 9001, Approval Certificate No: 912451, issued by LRQA Ltd.
- ◆ **Scope of Registration:** *'The design, manufacture, installation and maintenance of surface finishing plant, disabled access lifting platforms and associated equipment. Sub-contract manufacture to customer requirements.'*

### **Quality Policy**

- ◆ To consistently satisfy the requirements of all customers.
- ◆ To Implement and operate effective management systems.
- ◆ Comply fully with any applicable product standards, legislation and regulations.
- ◆ To foster a long-term working relationship based on mutual trust, and to the benefit of the client and the Company.
- ◆ To strive for continuous improvement in all our business activities.
- ◆ Dalby recognises that its employees are the company's greatest asset and as such, will reward employees who invest their commitment, skills and time in pursuit of the company's aims and ambitions.
- ◆ To provide an environment in which all employees are able to work productively and harmoniously.
- ◆ To treat clients and sub-contractors courteously, with respect and with absolute integrity.
- ◆ To assist clients in achieving their chosen objective through diligence and by acting with total professionalism.

### **Product Range**

- ◆ Major 'turnkey' Industrial finishing plants embracing surface blasting, pre-treatment systems, paint application booths and equipment, curing ovens, conveyor systems, etc.
- ◆ Standard industrial paint finishing plant and associated equipment.
- ◆ Large Spraybooth/Ovens for aircraft, rail vehicles, large plant, commercial vehicles, etc.
- ◆ A comprehensive range of Spraybooth/Ovens and systems for the road vehicle refinishing industry.
- ◆ 'After sales' products including service contracts and consumable filters.
- ◆ Sub-contract manufacturer of sheetmetal work to various industries.
- ◆ A range of disabled access platform lifts.

### **Major Client List**

Redacted



## Proposal & Quotation

### **Colourcube Automotive**

8B Franklyn Court  
Greave House Terrace  
Lepton  
Fenay Bridge  
Huddersfield  
HD8 0GB

### **For The Attention of Mike & Liz**

Our Ref: KB/GRS/D20251000008

7<sup>th</sup> November 2025

Dear Sirs,

### **RELOCATION OF EXISTING BOOTH & GENESIS 'Q' SPRAYBOOTH / OVEN FACILITY**

Following further discussions, we have pleasure in confirming our revised proposals and quotation for our Genesis 'Q' series Spraybooth/oven which we are now proposing as a semi down draught rear extracted model, the Evolution PLC control system is now offered as an option.

We have removed the option of a Genesis 'E' series booth.

We also offer a price for relocating the existing Dalby Easybooth unit, with upgrade work on the proposed relocated Easybooth.

New site details: Unit 13-14, Silver Street  
Moldgreen  
Huddersfield  
HD5 9AF

The scheme comprises the following equipment

1. Relocation of the existing Easybooth from the old site to new site, and additional ducting
2. Genesis 'Q' series combination Spraybooth / oven with rear chest extracted Spraybooth, 7m x 4m x 3.0m high with an option for our latest Evolution PLC control system
3. Paint mixing and gun wash room, combined unit 5.2m x 2m x 2.5m high
4. Ancillary items.

Please note the existing building has a gas meter rated at 175kW, the existing Easybooth uses 88kW and the Q booth 135kW, therefore the meter would need to be up-rated for the equipment to operate effectively.

The ducting for the booths is to be routed through the rear wall; due to the height restrictions of the building the plants would be mounted behind the booth with the booth pushed forward to allow maintenance access to the plant. In addition, due to limited access and the wall behind the building we would have to use a fixed scaffold for fitting the external ducting and providing edge protection.



## **Conformities**

The project will conform to:

- a) The Health & Safety at Work Act: 1974, and relevant mandatory supporting regulations.
- b) Machinery Directive 2006/42/EC.
- c) COSHH Regulations: 2002, with regard to Local Exhaust Ventilation and Air Circulation Machinery / Plant.
- d) The Environmental Protection Act 1990, including the Pollution Prevention and Control Act 1999 and relevant Process & Technical Guidance Notes.
- e) The Electricity at Work Regulations: 1989, with regard to hazardous environments.
- f) The Gas Safety (Installation and Use) Regulations: 1998 as amended.
- g) BS 7671 Requirements for Electrical Installations (IET Wiring Regulations, 18<sup>th</sup> Edition).
- h) HSG 258, 2017, Controlling airborne contaminants at work (LEV)
- i) We take guidance from BS EN 16985, Spray booths for Organic Coating Material - Safety Requirements

## **E.P.A. - Solvent Emissions**

The control of solvent emissions from this facility will be by the use of compliant paint materials and application equipment referred to in the Process & Technical Guidance Notes. In consideration of the likely maximum productivity of this facility and application of the BATNEEC criteria, there is no current economic technology for solvent gas arrestment from Spraybooth plants of this type.

## **Technical Notes Regarding Spraybooth Plant**

It should be noted that it is the responsibility of the client to notify and seek Planning, Environmental, Health and Safety and Fire Office approval for this installation and we are pleased to assist in this process.



## **1. Relocation Of Existing Spraybooth**

The following equipment is to be relocated:

- Dalby Easybooth series Spraybooth / Oven with extended height to 2.9m and front three leaf doors, 7m x 4m x 2.9m high.
- This booth was supplied by ourselves in 2016 under our contract ref SB5601 (drawing number P-COL11).
- The booth was ducted through the roof of the building.

### **1.1 Client Responsibilities at Old Site:**

We would suggest that the client, **prior to our visit:** -

- 1.1.1. Disconnect all compressed air pipeworks and any services fitted to the booth;
- 1.1.2. Remove any pumped application equipment fitted / or serving the booth.
- 1.1.3. Source pallets for assisting in the moving and loading of the booth's cabins (we would suggest 4 / booth)
- 1.1.4. Source the provision of a fork lift for assisting with dismantling and loading (we offer an option for providing this).

Following the removal of the booth the following should be carried out by the client: -

- 1.1.5. Making good the building floor once equipment is removed.
- 1.1.6. Making good of any holes in the ceiling once the ducts have been removed.
- 1.1.7. Removal from site of used extract filters.
- 1.1.8. Removal / stripping back of gas and electrics, other than the local disconnection.
- 1.1.9. Obsolete equipment will be left on site and will remain the property of the client or will be placed in skips provided by the client.

### **1.2 Dalby propose to perform the following at the old site:**

Our engineers will attend site to dismantle the booth, with the following performed: -

- 1.2.1 Disconnecting the gas from the booth burners, this will be made safe locally to the burner, the pipework is not being stripped back;
- 1.2.2 The electrics will be disconnected at the local isolators, and will be made safe locally;
- 1.2.3 We will bag the used extract filters; this will be handed to the client as it is specialist waste and should be removed using the client specialist waste company;
- 1.2.4 The electrics will be stripped from the control panels to the field devices;
- 1.2.5 The ducting through the roof will be dismantled;
- 1.2.6 The booth shells will be dismantled and stacked, on pallets provided by the client;
- 1.2.7 We will provide a scissor lift to assist in the safe removal of ducting, and to gain access to the roof, and provide edge protection whilst our engineers are on the roof.

### **1.3 Transportation Between Sites**

We have included to provide transportation between the old and new sites.

### **1.4 Re-Installation at New Site – Dalby Scope**

**Schedule of work to be carried out by Dalby at the new site:**

- 1.4.1 The Spraybooth will be re-assembled on a level base, in the same configuration as the original scheme;
- 1.4.2 The booth plant will be positioned and the ducting routed through the rear wall;
- 1.4.3 Once the plant is positioned, we would build the booth cabin
- 1.4.4 We have included for new angles / floor channels for the booth;
- 1.4.5 **We have included for new ducting** to be routed out of the rear wall of the building including wall plates and brackets for exiting the wall;



- 1.4.6 We have included for new input and extract filters for the booth;
- 1.4.7 Rewire the booth, utilising the existing conduit and cables;
- 1.4.8 Re-commission Spraybooth to isolator and fuel supply provided by others;
- 1.4.9 We would have to extend the fixed scaffold system along the building to provide suitable access to install the external ducting and provide edge protection whilst on the roof.
- 1.4.10 Obsolete equipment will be left on site and will remain the property of the client or will be placed in skips provided by the client.

#### 1.4.12 Optional 'Eco-Save' Mode on Control System

As an option we can incorporate a '**EcoSave**' *energy saving mode* to the booth, when it is relocated, this can **reduce** the **operational** running costs for spray booth/ovens by attacking the periods during which the booth is running but spraying operations are not taking place. These include periods such as loading & unloading vehicles from the booth and during masking/final preparation operations.

We would operate this mode by monitoring the compressed air usage into the booth and automatically switches the booth plant Off when spraying operations are not taking place (after a pre-set time). The Dalby control system continues to monitor operations inside the booth and automatically switches the plant back onto Spray Mode once spraying operations have commenced.

To do this we would have to fit the monitoring device and alter the wiring in the control panel.

#### 1.4.13 Optional New LED Lights – Work done at the same time as the relocation

As an option when the booth is relocated, we could replace the existing fluorescent light boxes and replace with our latest '**Hi-Lux**' **LED Lighting**.

When the booth is relocated the existing light boxes would be handed to the client for use elsewhere or scrap.

We will supply and fit a series of new LED light boxes into the booth, these would be wired back to the existing control panel, the panel wiring will have to be modified to accept the LED

Dalby have heavily invested in developing LED lighting for a spraybooth application where high light levels of diffused light are paramount, we can therefore offer a series of light boxes incorporating LED boards, which will provide an average **illumination level of 1000 lux**, with a maximum illumination level at the spraying zone of **up to 1200 lux**.

Six new boxes will be supplied and fitted at corner roof level, three per side, generally as the new Booth proposed, section 2.6.



#### 1.4.14 Optional “Aqua-Dry” Flash Off System: - Work done at same time as LEDS

As an option we could fit an ‘**Aqua-Dry**’ system can be installed within the spraybooth lighting units mounted at corner roof level. Note these can only be fitted if you have the new light boxes above as they fit within the corner light box area.

Use of the ‘**Aqua Dry**’ blower system offers *significant operational efficiency benefits* and savings for flash-off cycles.

The Dalby ‘**Aqua-Dry**’ Flash off System can reduce the flash off time for water based coatings by as *much as 70 %*. Providing real *time savings* of up to **25 minutes** per job, whilst offering a **90% saving in fuel cost (with Dalby spraybooth control panels)**. Offering users a *multi fold increase in productivity* when compared to a similar booth without the *fully integrated* Dalby Aqua-Dry system.

The system comprises a series of blowers which draw air from within the booth and blow it at high velocity over the vehicle through directional nozzles, 6 blowers are fitted on each side of the booth, 12 in total to give excellent vehicle coverage.

The existing booth only has spray and bake modes.

The blowers are supplied with a dedicated ancillary control panels with and on / off switching and a timer. We would take power to the control panel from the main booth panel.

This panel relies on the operators to use the blower in the necessary situation:

- Ideally, they should be used with the plant in recirculation with a temperature of 25-35°C – this could be done by switching the blowers on in ‘bake’ but setting the temperature to say 35°C – **They are not rated to operate at more than 40°C.**
- Or they could be used on spray mode (at spray temperature) once spraying is completed, but you need to ensure that are not used during spraying as this will affect the painting.

**Please note that the price excludes any replacement or any defective parts**

#### 1.5 Client Responsibilities at the new site

The following works would need to be undertaken by the client and are not part of our scope: -

- 1.5.1 Builder's work, forming level floor base,
- 1.5.2 Holes through the rear wall for ducting and weathering of same, and the provision of guy wire anchor points.
- 1.5.3 Electricity supply and connection to our control panels; 3 phase + neutral and earth (TN-S system) is required together with a suitable test certificate.
- 1.5.4 Fuel supply to input air heater and connection to burner together with a suitable test certificate.
- 1.5.5 Any compressed air work, including over pressurisation shut off to spraying air.
- 1.5.6 A Fork Lift truck or similar lifting equipment for off-loading purposes and positioning fan units.
- 1.5.7 Dalby assume that safe access to the roof for ductwork installation would be via a scaffold tower and that the roof is safe to walk on. If the site is controlled by a Principal Contractor we would exclude access equipment to the roof of the building for duct installation, and any additional safety equipment which is deemed necessary, by the Planning Supervisor, this would be quoted at additional cost.
- 1.5.8 Any sprinklers or fire suppression systems.



## **2. Dalby Genesis 'Q' Pit Series Spraybooth / Oven Unit**

### **2.1 Layout and Operation:**

The Dalby 'Q' booth is designed to meet the demands of all different types of businesses.

Whether a small owner operator or large franchise bodyshop the Dalby Genesis 'Q' Booth provides an economical route to Quality refinishing that is unrivalled.

The booth incorporates an integral rear extraction chest, designed for low level extraction, therefore expensive civil work is not required.

This spraybooth operates with a semi down draught diagonally scavenging air movement, whereby air enters the booth at the front plenum area and is extracted at the rear through an extract chest, creating a tunnel effect.

This booth is the Dalby New Generation '**Genesis Series**' with the following new features:

- Booths are finished in white polyester both inside and out;
- Latest **LED lighting**;
- The booths have a new '**Slimline**' **control system** incorporating integral flash off mode, with fast acting pneumatic dampers.
- Control system incorporates "**EcoSave**" **system** with standby mode to minimise running costs.

### **2.2 Nominal Internal Dimensions:**

Length - 7.0m  
Width - 4.0m  
Extended Height - 3.0m – Internal clearance height 2.95m

### **2.3 Construction:**

Main structure comprises vertical panels with lattice roof beams forming the roof plenum chamber. Wall panels are mechanically fixed to aid sealing and provide rigidity.

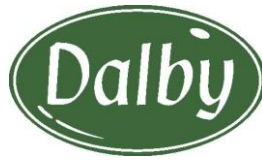
Wall construction is double skin galvanised steel panels, insulated to give good rigidity and sound dampening. Both inner and outer skins are **pre-finished in white polyester**, as is the floor and roof trim.

Dalby panels are **certified as half hour fire rated** to **British standards**.

The roof is galvanised steel and incorporates insulation provision.

Structure is sealed on erection to give good air tightness.

The spraybooth is a free-standing enclosure fitted internally independent of the building in which it is housed.



## 2.4 Vehicle Entry Doors:

Vehicle entry doors are located at the front of the booth.

Nominal door openings to be 3.0m wide x 2.9m high.

Doors are three leaf double skin insulated folding type coloured to match the booth, and have white trim.

Doors incorporate an easily replaced compression magnetic seal, glazed viewing panels and lever/cam closers.

## 2.5 Personnel/Escape Door:

Two double skin insulated self closing personnel escape doors are provided.

Doors incorporate easily replaceable compression seals, self closing device and glazing.

One door to be fitted in the side of the booth at the rear, the other door to be fitted in the vehicle entry door set. Doors to be diagonally opposite as the site location dictates.

## 2.6 'High-Light' LED Lighting:

As standard we will incorporate our latest LED lighting system

Dalby have heavily invested in developing LED lighting for a spraybooth application where high light levels of diffused light are paramount, we can therefore offer a series of light boxes incorporating LED boards, which will provide an average **illumination level of 1400 lux**, the same as fluorescents, with a maximum illumination level at the spraying zone of **up to 1700 lux**.

LED lighting's main benefit is the energy efficiency of the LED boards compared to our equivalent fluorescent light fittings and tubes, with **energy savings of 53%\***.

In addition, LED lighting has an anticipated **life span of in excess of 10 years** with minimal reduction of light levels over time, they will save the time and costs associated with re-tubing the light boxes, which would be expected every 3 years with normal fluorescents.

Dalby have developed this LED solution specifically for spraybooths and include a **specialty developed light efficient diffuser** which removes the spotting effect with standard LED's.

*\* Actual measured values of LED boards against Dalby fluorescent light boxes.*

## 2.7 Performance Data:

The spraybooth will have an air handling plant to give a semi down draught diagonally scavenging air input into the Spraybooth, with rear chest extraction.

This spraybooth will have the following air flow characteristics:

|   |   |
|---|---|
| Total air capacity  | 20,000 m <sup>3</sup> /Hr (11,770 ft <sup>3</sup> /min) |
| Air change rate - empty   | 4.0 - per minute - ext height                           |
| Air change rate – loaded with a family saloon<br>4.5m long x 1.8m wide x 1.25m high | 4.6 - per minute - ext height                           |



|   |                                    |
|---|------------------------------------|
| Average tunnel air velocity along the empty booth | 0.41 m/sec - ext height            |
| Average tunnel air velocity in the loaded booth   | 0.51 m/sec - ext height            |
| Spray temperature rise availability above ambient | 22°C                               |
| Flash Off Mode                                    | 30°C - 40°C with 90% recirculation |
| Bake temperature                                  | 80°C with 90% recirculation        |
| Heater output capacity                            | 135kW (460,000 BTU's / Hr)         |
| Filter area of EU5 input filters                  | 7 m <sup>2</sup>                   |
| Air speed through input filters                   | 0.79 m/sec                         |
| Filter area of EU2 & EU3 extract filters          | 4m x 1m                            |
| Air speed through extract filters                 | 1.39 m/sec                         |

## 2.8 Input Fan System:

Main input system to incorporate a double inlet **centrifugal fan** unit fitted within a case with belt and pulley guards, to cover all moving parts. These fans produce **high air movement** with **low noise levels**, and have a 400mm diameter impeller powered by a 4.0 kW, 3 phase motor.

## 2.9 Heating System:

Dalby spraybooths feature the very best in burner technology to provide years of trouble-free operation and low running costs.

30% gas savings with Direct Firing. - Many years ago, Dalby pioneered the use of direct firing of gas in an automotive refinishing type application and has always sold on the **significant cost savings** achieved.

As part of our drive towards **total efficiency and quality** all gas firing booths from Dalby are now fitted with **fully modulating venturi burners**.

This type of burner works by modulating the flame dependant on heat demand rather than continually switching on and off. The **benefits** during use are more **even working temperatures** and **more accurate control** on spray, flash off and bake cycles.

This heating system will use natural gas and have an output capacity of 135kW (460,000 BTU's / Hr) to give a temperature rise availability of 22°C above the external ambient in the spray cycle, and an air temperature of 80°C on bake mode.

On recirculation in flash off and bake modes both fans operate in series. This gives a **significantly increased airflow** on the spray and bake cycles to produce an **even faster** cycle time and **increase productivity**.

In the **flash off mode and bake cycle** the air will recirculate through the heating system to optimise fuel costs; a 10% ventilation rate is incorporated into this mode to prevent the build up of solvent gases in accordance with HSE Guidance Notes.

Dalby damper controls are now **pneumatically controlled** to achieve **immediate switching** between modes to achieve the **highest output levels** for the operator.

Automatic control dampers are fitted into the system for switching between spray and bake mode and for controlling booth cabin pressure.



## 2.10 Input Filtration:

Air from atmosphere will enter the duct system and be heated to the required temperature, it will then enter the booth via a **front ceiling plenum chamber**. Air will diffuse into the booth through an EU5 fine filter media.

Dalby input filter systems are to the **European EU5 Standard** and have an arrestance of **98%** to DIN 24185/BS6540. These filters are a **high-quality media** to ensure all air is **effectively filtered** prior to booth entry and have a scrim facing to ensure integrity and performance.

The quality of any filter is of no consequence unless it is properly supported to prevent air bypass. **All Dalby booths feature a specially engineered filter frame** system, which is **highly effective** in trapping and supporting the filter media against the roof of the spraybooth.

Additionally, the frames are hinged to allow access to the filters from inside the booth and **simple replacement of media** without removing the whole frame. This is **quicker and safer** than complete removal and **saves time** as it can in most cases be carried out **quickly by one person**.

## 2.11 Mounting of Plant:

In order to minimize the space taken up within the workshop the input plant is roof and chest mounted to **maximize available floor space**.

## 2.12 Extraction System and Filtration:

The extraction system incorporates one exhaust fan which is a double inlet centrifugal type similar to the input.

### 2.12.1 Rear chest extraction:

Air will be extracted from the booth via a rear mounted extraction chest, fitted with easily accessible two stage dry filtration system which will achieve emissions below 10mg/m<sup>3</sup> as required by the EPA.

The extract chest is fitted with a two-stage dry filtration system comprising: -

- Primary filtration **DFM1000** (EU2 grade) paint arrestor. Monofilament glassfibres are built up to create a matrix with a progressive density, having an open structure on the air inlet face and a firm laminate backing at the air exit face. This promotes 'in-depth' filtration (not surface loading) and therefore high dust holding capacity.
- Secondary **DFM2000** filter (EU3 grade). The filter media is manufactured from thermally bonded fibres which form a dense matrix with excellent mechanical strength and performance characteristics

## 2.13 Ductwork:

All ductwork is constructed from galvanised steel and **conforms to DW144 standards**.

In accordance with the Environmental Protection Act (EPA) the exhaust stack will terminate at a height of **3m above the apex** of the building with an **efflux velocity** in excess of the minimum requirement of **15m/sec**.



We have included ducting to suit a building with a **maximum height** of 5m to eaves and 7m to apex.

- Intake ducting is included routed through the rear wall behind the booth at a **maximum height of 5m** from floor level, and includes roof plate and weather skirt and intake cowl.
- Extract ducting is routed through rear wall of the building and will turn vertically upwards to a **maximum height of 10m** from floor level and includes roof plate, weather skirt and water ingress measures to **prevent rainwater** running into the fans.

### 2.13.1 Ducting & Access

There is a wall behind the building where the ducts are to exit, this is 1m and there is insufficient access to use a scissor lift.

This would therefore necessitate the use of a fixed scaffold system to allow the ducts to be installed, and provide safe edge protection for the operatives as they access the roof.

### 2.14 Control System:

The control system will be a new Dalby Slimline relay logic type.

This system will provide the following features:

- Operational mode switching: Off / Spray / Flash Off / Bake
- Temperature readout on Spray mode
- Temperature readout on Flash off Mode
- Temperature readout on Bake mode
- Process cycle time control
- Light Switching
- Burner resetting
- Adjustment for spray, flash off and bake temperature setting, these would be pre-set and controlled to ensure set limits are not exceeded
- Total hours run indication
- Cabin pressure monitoring & readout
- Automatic shutdown and audible alarm if the booth becomes over pressurised in the spray cycle.
- The panel contains an electrical contact that can activate a shut off valve on the compressed air supply, should the booth become over pressurised.

#### 2.14.1 Automatic 'EcoSave' Energy Saving Mode:

The Dalby '**EcoSave**' energy saving mode can **significantly reduce** the **operational** running costs for spray booth/ovens by attacking the periods during which the booth is running but spraying operations are not taking place. These include periods such as loading & unloading vehicles from the booth and during masking/final preparation operations.

Potential **fuel savings of up to 90%** are available by using this unique technology which automatically switches the booth between Spray Mode and an **Energy Saving** recirculation mode when spraying operations are not taking place. The Dalby control system continues to monitor operations inside the booth and automatically switches the plant back into a Spray Mode once spraying operations have commenced.



## 2.15 Optional 'Evolution' Control System: 'Interactive' Touch Screen PLC

As opposed to the standard relay logic control system with 'Eco-Save' we could as an option incorporate our latest 'Evolution' PLC system which is designed for maximum energy saving by allowing operators to switch between 'Performance' 'Smart' and 'Economy' modes – giving Energy Saving potential by running the booth at 50% airflow

The system would incorporate an '**Touch Screen**' PLC control system with coloured HMI.

This system will provide the following features:

- \* Operational mode switching: Off / Spray / Flash Off / Bake
- \* Efficiency switching
  - 'Performance' Mode (20,000m<sup>3</sup>/hour airflow)
  - 'Smart' Mode Auto interactive switching between Performance & Economy to give optimal balance
  - 'Economy' Mode (10000m<sup>3</sup>/hour airflow)
- \* High level function LED indication strip identifying mode operation and time elapsed indication
- \* Temperature readout on Spray mode
- \* Temperature readout on Flash off Mode
- \* Temperature readout on Bake mode
- \* Automatic cool down to Spray temperature set point after bake cycle is complete
- \* Process cycle time control with automatic switching between modes
- \* Light Switching – with automatic light switching with PIR sensors
- \* Burner resetting (after auto reset attempt)
- \* Adjustment for spray, flash off and bake temperature setting, these would be pre-set and controlled to ensure set limits are not exceeded
- \* Total hours run indication
- \* Cabin pressure monitoring & readout
- \* Automatic cabin pressure balancing
- \* Automatic shutdown and audible alarm if the booth becomes over pressurised in the spray cycle.
- \* The panel contains an electrical contact that can activate a shut off valve on the compressed air supply, should the booth become over pressurised.
- \* Input filter monitoring and renewal indication
- \* Extract filter monitoring and renewal indication
- \* High level function indication lamps for mode operation and fault indication
- \* Visual warning when the booth requires servicing
- \* Full diagnostic system for plant and field components to simplify fault finding and hence reduce down time

### 'Evolution' PLC Control Features:

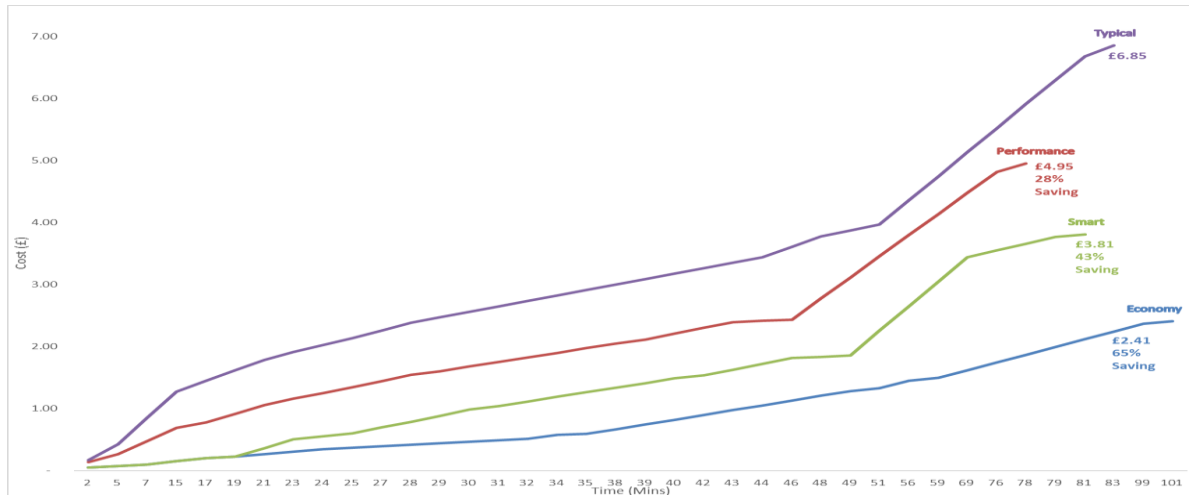
#### 2.14.1 'Performance' & 'Economy' Modes: '*Smart*' technology

The '**Touch Screen**' PLC control system allows the operator to switch the booth between 'Performance', 'Smart' and 'Economy' in all modes of operation.

With 'Performance' mode the plant will operate at the full 20,000m<sup>3</sup>/hour air capacity – ideal for spray mode and flash off where maximum airflow is required'. Economy' mode operates at 50% airflow and can be used when carrying out operations such as final preparation where small amounts of ventilation are required. This is done using inverter drives on the input and extract fan motors, these drives are mounted locally to the fans.



With Dalby 'Smart' Technology the operator will operate in an automatic hybrid mode to offer maximum performance at the lowest energy cost. With Smart 'Stop/Start' technology, the booth senses the activity taking place in the booth cabin and will automatically switch between EcoSave, Economy, Performance, and Stop modes, minimising energy consumption whilst optimising cycle time to maximise booth throughput.



Costs based on typical cycle comparing Dalby Q booth with Dalby Evolution Q booth  
 Costs are calculated using an Electricity price of £0.35/kWh and a Gas cost of £0.045/kWh  
 Cycle times are an illustration only and would vary dependent on the user's specific paint and application processes.

### 2.15.2 Automatic 'EcoSave' Energy Saving Mode:

The Dalby 'EcoSave' energy saving mode has **significantly reduced** the **operational** running costs for spray booth/ovens by attacking the periods during which the booth is running but spraying operations are not taking place. These include periods such as loading & unloading vehicles from the booth and during masking/final preparation operations.

Potential **fuel savings of up to 90%** are available by using this unique technology which automatically switches the booth between Spray Mode and an **Energy Saving** recirculation mode when spraying operations are not taking place. The Dalby control system continues to monitor operations inside the booth and automatically switches the plant back into a Spray Mode once spraying operations have commenced.

### 2.15.3 Mist Clearance & Mode Indication:

A LED strip above the vehicle doors shows which mode the booth is in:

|                             |  |
|-----------------------------|--|
| Green                       | Spray Mode                             |
| Green 'Slow' Flashing       | 'Eco-Mode'                             |
| Green 'Fast' Flashing       | Mist Clearance taking place            |
| Blue                        | Flash off - With count down indication |
| Orange                      | Bake Mode - With count down indication |
| Orange 'Pulsing'            | End of bake cycle                      |
| Cascading different colours | Fault warning                          |

### 2.15.4 Automatic Light Switching:

The 'EQ' incorporates an automatic mode to the booth lighting, whereby PIR sensors inside the booth automatically switch on the lights on when someone enters the booth, and then



switch them off after a set time when no motion is detected. We have included two monitoring devices for the booth.

The control panel will be fitted with an on / Auto / off switch for mode activation.

### 2.15.5 Optional 'Evolution Plus' Touch Screen PLC Controls with JobCost Module

The 'Evolution Plus' touch screen PLC control system includes all of the advanced energy saving features of the **Evolution** PLC control, **AND** also includes the new **JobCost** module which allows the operator to easily track and monitor the gas and electricity costs of the spraybooth.

**JobCost** module features:

- Track accurate cost per job data for gas and electricity consumption- what does it cost to paint each vehicle
- Enter painter and job references for each job to enable easy cost identification
- Enter site specific gas and electricity costs per KWh
- Full data logging of indicative gas and electricity costs in each mode of operation
- Data displayed on large, 12.1" colour touchscreen
- Job cost history for each job viewable on the touchscreen PLC
- Detailed data downloadable to PC for full analysis
- PC based reporting and dashboard to display booth performance
- Monitor sprayer efficiency, booth utilization, job run times, spraybooth running costs and more!

| User Name | Job Reference | Job Started      | Finish           | Cost   |
|-----------|---------------|------------------|------------------|--------|
| Redacted  | Redacted      | 09:52 19/05/2023 | 00:00 00/00/0000 | £ 0.36 |
| Redacted  | Redacted      | 07:35 19/05/2023 | 08:46 19/05/2023 | £ 5.16 |
| Redacted  | Redacted      | 15:37 18/05/2023 | 16:59 18/05/2023 | £ 4.68 |



11:33:42 19/05/23

# Job Costings

| User Name | Job Reference | Start            | Finish           | Cost   |
|-----------|---------------|------------------|------------------|--------|
| Redacted  | Redacted      | 09:52 19/05/2023 | 11:03 19/05/2023 | £ 2.22 |
|           |               | 07:35 19/05/2023 | 08:46 19/05/2023 | £ 5.16 |
|           |               | 15:37 18/05/2023 | 16:59 18/05/2023 | £ 4.68 |
|           |               | 13:02 18/05/2023 | 15:12 18/05/2023 | £ 3.15 |
|           |               | 09:52 18/05/2023 | 12:06 18/05/2023 | £ 6.78 |
|           |               | 07:33 18/05/2023 | 08:48 18/05/2023 | £ 2.98 |
|           |               | 14:05 17/05/2023 | 16:22 17/05/2023 | £ 5.77 |
|           |               | 11:56 17/05/2023 | 13:44 17/05/2023 | £4.92  |
|           |               | 09:50 17/05/2023 | 11:40 17/05/2023 | £ 3.76 |
|           |               | 07:54 17/05/2023 | 09:33 17/05/2023 | £ 2.65 |

## 2.16 Optional Dalby Advanced “Aqua-Dry” Flash Off System:

To aid the curing of water-based paints, an **Aqua-Dry’ system** can be installed within the spraybooth lighting units mounted at corner roof level.

Use of the ‘**AquaDry’ blower system** offers *significant operational efficiency benefits* and savings on both the flash-off and bake cycles.

The Dalby ‘**Aqua-Dry’ Flash Off System** can reduce the flash off time for water-based coatings by as *much as 70 %*. Providing real *time savings* of up to **25 minutes** per job, whilst offering a **90% saving in fuel cost**. Offering users a **multi fold increase in productivity** when compared to a similar booth without the **fully integrated Dalby Aqua-Dry system**.

The system comprises a series of blowers which draw air from within the booth and blow it at high velocity over the vehicle through directional nozzles, 6 blowers are fitted on each side of the booth, 12 in total to give excellent vehicle coverage.



#### **4. Dalby Double Skin Paint Mixing / Gun Wash Room**

##### **4.1 Layout & Operation**

An enclosed paint mixing and gun wash room is provided, the two areas are to be constructed as one large room with a division wall to divide the two sections, this division is having an opening for access.

The room will be fitted with lighting and a mechanical ventilation system. The gun wash room will be fitted with two mechanically extracted portals to allow connection of gun wash machines.

##### **4.2 Nominal Internal Dimensions:**

| Paint Mix Room | Gun Wash Room |
|----------------|---------------|
| Length - 3.2m  | Length - 2.0m |
| Width - 2.0m   | Width - 2.0m  |
| Height - 2.5m  | Height - 2.5m |

The front elevation is extended to 3.8m to match the height of Booth 2.

##### **4.3 Construction:**

Wall construction is double skin galvanised steel panels, insulated to give good rigidity and sound dampening.

Both inner and out walls are pre-finished in white polyester.

The roof is single skin galvanised pre-finished in white polyester.

##### **4.4 Personnel/Escape Doors:**

Two double skin insulated self-closing personnel escape doors is provided, one exiting the paint mixing area, the second the gun wash.

Door incorporates easily replaceable compression seals, self-closing device and glazing.

##### **4.5 Division Wall:**

The rooms will be divided with double skin panelling, finished in white to both sides. An opening will be left to permit access from one room to the other, this opening will be nominally 0.8m wide x 2.5m high.

##### **4.6 Lighting:**

Lighting system to comprise an LED type, as the spraybooth, using LED boards and the specially developed light efficient diffuser, generally as the spraybooth, section 1.6.

Two lights are fitted, one in each room.

##### **4.7 Air Performance In PMR:**

The facility will incorporate an extraction system drawing air from low and waist level at a rate of 20 air changes per hour from the empty room.



All extracted air will be extracted to atmosphere via ductwork to the DW144 standard. Ductwork includes roof plate, weather skirt and terminal set.

Replacement air will be drawn into the enclosure from the workshop through a flame trapped inlet filter mounted on the roof of the room.

#### **4.8 Gun Wash Extraction:**

An additional extraction port will be fitted within the gun wash room, for connection to a gun wash unit (by others).

These ports will be connected to an independent extraction fan and duct system.

#### **4.9 Control:**

A simple switch will be supplied for the control of the room lighting and extraction systems.



## **5. Ancillary Works**

### **5.1 Wall Openings for Ducting:**

The ducts are to be routed through the rear wall, as an option we could cut and seal these openings comprising of the following: -

For Booth 1 – Easybooth: -

- Cut and seal Ø630mm hole for input duct.
- Cut and seal Ø630mm hole for extract duct.
- Provide & seal 2 x roof anchor points for solid stays.

For Booth 2 - Q Spraybooth/oven: -

- Cut and seal Ø800mm hole for input duct.
- Cut and seal Ø800mm hole for extract duct.
- Provide & seal 2 x roof anchor points.

For the Paint mixing room:

- Cut & seal new Ø180mm roof hole for extract duct from mixing room
- Cut & seal new Ø125mm roof hole for extract duct from gun wash

Please note that we have assumed that the building wall and roof are a steel cladding construction, and no asbestos is present, and our costs have been based on this fact. Under current legislation it is the client's responsibility to notify any contractors of the presence of asbestos.

We would cut the openings in the wall and seal the opening to the roof eaves using galvanised steel sheet from the eaves to the soaker plates.

We would use the fixed scaffold for gaining access to the wall and roof and use a hoist for lifting the sheets and for providing edge protection for our engineers whilst on the roof.

### **5.2 Provision of Fork lift – By client**



### **Dalby 3 Year Warranty Provision**

Dalby Offer a **3-year** parts and labour warranty on all new installed and commissioned equipment. This warranty is for the supply of new parts or repair of faulty parts, labour and travel costs.

The 3-year warranty cover is valid for customers whose equipment is covered by a Dalby "**Total Care Package**" service agreement, the details of which are available on request from our service department. Without undertaking this agreement, the warranty period for the equipment will be for 12 months or 1000 hours of service, whichever is the sooner.

### **Installation and Commissioning**

The plant will be installed under the guidelines of the Construction (Design and Management) Regulations with regard to safe working practices. Dalby would undertake the role of Principal Contractor and Designers as standard for our equipment only.

Electrical wiring will be in plastic conduit and cable trays in accordance with IEE regulations, other wiring standards can be adopted at additional costs.

Plant to be commissioned and fully set up on completion and a test certificate of operation and conformity to be given to client together with instruction manual. Operational training to be given to clients nominated personnel.

On completion of the project the site would be cleared of all packing materials etc. utilising the client's skip / refuse facilities.

### **Client Responsibilities**

The following works would need to be undertaken by the client and are not part of our scope: -

1. Builder's work, forming level floor base, pit work, holes through roof/side wall for ductwork and weathering of same, and the provision of guy wire anchor points.
2. Electricity supply and connection to our control panel; 3 phase + neutral and earth (TN-S system) is required together with a suitable test certificate.
3. Fuel supply to input air heater and connection to burner together with a suitable test certificate.
4. Any compressed air work, including over pressurisation shut off to spraying air.
5. Static Earthing within the spraybooth.
6. A Fork Lift truck or similar lifting equipment for assisting with dismantling and loading and old site
7. Provision of fork lift for off loading purposes and assisting with installation.
8. Dalby assume that safe access to the roof for ductwork installation would be via an aluminium scaffold tower or boom lift and that the roof is safe to walk on. If the site is controlled by a Principal Contractor we would exclude access equipment to the roof of the building for duct installation, and any additional safety equipment which is deemed necessary, by the Planning Supervisor, this would be quoted at additional cost.
9. Any sprinklers or fire suppression systems.
10. Emergency lighting, however, if required it can be specified and quoted for as an optional item.
11. If building drawings are supplied it is assumed that they are correct, and anomalies necessitating rework would be chargeable.



**Prices**

Our prices for supply, installation and commissioning: -

- 1. Relocation of Easybooth and provision of new ducting for new site ..... **Redacted**
- 2. **Genesis** 'Q' Series Spraybooth/Oven, Direct Gas Fired With Rear chest extraction, With relay logic controls with 'EcoSave' Extended height booth to 7m x 4m x 3.0m.....
- 4. Combined paint mixing and gun wash room, 5.2m x 2m x 2.5m.....

**Optional Items**

- 1.4.12 Modification of Easybooth Controls for Eco-Save .....
- 1.4.13 Up-Grade lights to latest LED Board light boxes .....
- 1.4.14 Advanced '**Aqua-Dry**' Flash Off System.....
- 2.15 'Evolution' Control System: 'Interactive' Touch Screen PLC .....
- 2.15.5 '*Evolution Plus*' Touch Screen PLC With JobCost module ....Add to abo
- 2.16 Advanced '**Aqua-Dry**' Flash Off System.....
- 5.1 Cutting and sealing wall openings for ducting .....

**Terms and Conditions**

The above prices are nett excluding VAT. They are also subject to a proper site survey and establishment of final engineering details with the client.

Our terms of payment are:-

30% deposit with order, 65% of total value of order on commencement of erection of the equipment, and remaining 5% payable on commissioning, or within 7 days of completion of our work whichever is the sooner, or as negotiated with our Managing Director, Mr R Lowe. Please note payments to be received within 7 days of invoice.

Please note that our prices do not include for a main contractor discount.

Prices quoted are valid for an order placed within 1 months of this quotation provided that the delivery is made within 3 months of the date of this quotation. E & OE.

Please note that this quotation supersedes any previous quotation submitted.

Our standard terms and conditions apply and are enclosed with this quotation.



Should you require any further assistance please do not hesitate to contact the writer.

Assuring you of our best attention at all times.

Kayleigh Burke  
**Sales Manager**