



## 5 SERIES SPRAY BOOTH OVEN FEATURES & BENEFITS



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## **JUNAIR 5 SERIES SPRAY BOOTH OVEN**

### **FEATURES & BENEFITS**

The Junair 5 Series spray booth oven is a highly specified production unit. Every feature of this spray booth has been engineered to be class leading. Combined with the energy saving and production enhancing technology the 5 Series spray booth oven delivers the highest quality paint finish at the lowest cost per job. A LEVAC or EVAC fully extracted and balanced floor is incorporated as standard.

The following items highlight the features and benefits of a Junair 5 Series spray booth oven. These should be taken into consideration when researching and comparing modern spray booths available in the market today.

#### **DOUBLE SKIN INSULATED CONSTRUCTION**

- White internal & external
- Coated galvanised steel with fibreglass insulation
- Superior fire resistance & structural integrity
- Saves energy
- Low noise level, improved lighting
- Attractive finish with an anti-corrosion coating for long life

**COMMENT / BENEFIT:** Junair Spraybooths do not use cooler room wall panels (aluminium skin with styrene insulation). In our opinion, these wall panels are not suitable for spray booth oven construction. They have limited capability in containing a fire and they are not rated for the high temperatures required for short bake times (i.e. short bake times require high metal temperatures that require even higher air temperatures).

#### **FULL CEILING SUPPLY AIR INPUT**

- Reduces overspray contamination
- Improves mist clearance times
- Faster curing for off car panels

**COMMENT / BENEFIT:** The Junair 5 Series spray booth has very small hips that have allowed us to design a large input plenum (full width, full length input plenum with full width, full length ceiling filters). This has resulted in an increase in size of the spray/clean zone providing the ideal spraying environment for cleaner jobs for parts on the vehicle or on panel stands (off the vehicle).

## **TWO FULLY EXTRACTED, FULLY GRIDDED FLOOR OPTIONS – LEVAC & EVAC**

- True down draught performance with fully extracted floor
- Shallow excavation (500mm) or low profile above ground design (140mm)
- Excellent mist clearance & faster curing
- Paint off car panels anywhere in the spray booth cabin

**COMMENT / BENEFIT:** Coupled with the full ceiling supply air input, the full width, full length fully balanced extracted floor results in almost the entire cabin becoming the spray/clean zone. This produces ideal air flow for cleaner, faster paint jobs anywhere in the spray cabin.

## **HIGH OUTPUT, HIGH FREQUENCY ENERGY EFFICIENT LIGHTING**

- Flicker free start extends tube life, over 1200 lux
- Brilliant colour rendition
- Low maintenance cost

**COMMENT / BENEFIT:** The Junair 5 Series spraybooth provides ideal lighting conditions for spraying high quality paint jobs (anywhere in the spray cabin).

## **DIRECT DRIVE, BACKWARD CURVED CENTRIFUGAL FANS**

- No drive belt costs or drive belt failures
- Efficient and powerful, quiet in operation
- Large blade design can be easily cleaned

**COMMENT / BENEFIT:** Unlike axial fans found on many spray booths, these powerful efficient fans are able to generate high air flows (volumes) throughout the life of the exhaust filters, so spraying conditions do not deteriorate as the floor filters become loaded with paint overspray.

## **FULLY MODULATING DIRECT FIRED STAINLESS STEEL BURNER**

- Natural gas or LPG
- Rapid temperature rise, extremely close temperature control
- Low running cost
- Quality components for performance and reliability
- Good combustion means no fume smells or paint problems

**COMMENT / BENEFIT:** Unlike other modern spray booths that typically have direct fired burners, the Junair burner design allows for clean combustion regardless of the speed of the main fans (most modern booths need the main fans to operate at high speeds to ensure sufficient air passes across the burner head). Junair spray booths can and do reduce the main fan speeds to save gas and electricity when full air flows are not required (i.e. during the idle cycle, flash off cycle, bake cycle).

## **QADs™ – AUXILIARY AIR MOVEMENT SYSTEM**

- Enables faster flash off of waterborne base coats
- Faster curing of low VOC top coats
- Saves up to 40% of energy cost
- Overall paint process around 35% faster
- Cover the whole vehicle in one operation
- Adjustable nozzles for painting panels off the vehicle

**COMMENT / BENEFIT:** QADs™ are a Junair patented product. They are considered the standard for flashing off waterborne base coats. Flash off times are in the 5-7 minute range for painted parts anywhere on or off the car body. QADs™ also reduces bake times by approximately 35% and saves up to 40% in energy running costs.

## **VARIABLE AIRFLOW TECHNOLOGY**

- Fully automated variable speed drives
- Reduced airflow = lower fuel and energy costs
- When combined with QADs™ save up to 65% of spray booth energy costs

**COMMENT / BENEFIT:** Junair's unique Variable Airflow Technology (VAT) automatically reduces the air volume in the spray booth to suit the process. For example, in spray mode air flows (air volume) is at 100%. In idle mode air flows are approximately 25% of those during the spraying cycle. The flash off and bake cycles have air flows 60% and 50% respectively of the air flows required for spraying. Variable Airflow Technology is fully automatic so fuel and electricity savings are guaranteed.

## **FUEL SAVER MODE**

- Automatically changes air flow during idle and flash off modes
- Reduces energy costs by around 22% alone
- Combined with QADs™ & VAT save 70% of spray booths energy costs

**COMMENT / BENEFIT:** Instead of fully exhausting the air exiting the spray cabin, Junair's Fuel Saver (FS) Mode recirculates a portion of the air in the spray booth. This results in the burner heating already heated air, saving fuel. Coupled with Variable Airflow Technology, FS Mode and QADS™, up to 70% energy savings can be achieved compared to other modern spray booths on the market. Features of the Junair burner design, the iSystem<sup>2</sup>, VAT and FS mode produce clean combustion during every booth cycle. This means no or very low concentrations of carbon monoxide compared to other modern booths.

## SPRAY BOOTH CONTROL PANEL OPTIONS

- Conventional push button/switch control panels
- *iSystem*<sup>2</sup>
  - 145mm colour touch screen
  - 254mm colour touch screen
- Remote diagnostic upgrade

**COMMENT / BENEFIT:** The *iSystem*<sup>2</sup> is a unique Junair technology that fully automates the production enhancing and energy savings features of the Junair 5 Series spray booth. The *iSystem*<sup>2</sup> also incorporates eight (8) different bake profiles, in which the baking temperature can be programmed for every 5 minute increment of each bake cycle. This ensures bake times are kept to a minimum to maximise booth production capacity while saving fuel and electricity and at the same time ensuring a consistent quality of cure.

**COMMENT / BENEFIT:** Remote diagnostics is a Junair technology that works in conjunction with the *iSystem*<sup>2</sup>. Process control software upgrades can be downloaded remotely. It also allows us to remotely connect with the spray booth when a fault occurs to determine which part might have failed for speedy replacement by a local technician and to change engineering settings should they be required. This will ensure the booth is running optimally with minimum down time for the life of the booth.

# 5 SERIES (20) SPRAYBOOTH TECHNICAL SPECIFICATION SHEET



TECHNICAL SPECIFICATION	
<b>Dimensions</b>	Internal External 6920mm x 4000mm x 3030mm high 7018mm x 4080mm x 3530mm high
<b>Options</b>	Length Width Height 8071mm / 9224mm (internal) Specials to order 4500mm (internal) 3030mm / 3600mm (internal)
<b>Air handling Plant</b>	Position Rated air-flow Air movement Burner Burner type Fans Floor standing or roof mounted 20,000 m³/h – 4,0 air changes per min Down draught; ceiling input; floor extraction Direct gas fired – natural gas or LPG. 170 kW Fully modulating gas burner Direct drive centrifugal type with aluminium impellers
<b>Filtration</b>	Input Filter area Input filter type Extract filter type Full length and full width input filter Resin applied 600g – 10 micron – EU5 Duplex fibreglass and polyester fibre (less than 10mg/m³)
<b>Air Temperature</b>	Spray Bake Flash off Rise 22°C (typical) adjustable. 80°C (maximum 100°C) 37°C (typical) adjustable 25°C above external ambient
<b>Fan motors</b>	5.5 kW – efficiency 1 – 415V three phase
<b>Lighting</b>	Standard Lux level Ballast Ultralux fittings with high lumen fluorescent tubes 1200 lux High frequency electronic. No maintenance.
<b>Floor</b>	Standard Fully extracted and gridded floor
<b>Energy saving</b>	QADS FS Mode Variable air flow Optional auxiliary air moving system (40% saving) Optional automatic recirculation system Optional automatic 4-speed VSD system (See spraybooth running cost sheet for detailed energy savings)
<b>Noise</b>	Internal cabin Nominal 76 – 78 dBA. Meets the latest HSE legislation
<b>Services</b>	Electrical supply Gas input Gas pressure 32 A / 415V / 50Hz TP + neutral Natural gas 15.6 m³/h / LPG 6.6 m³/h Min – 15mbar Max – 21mbar



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# 5 SERIES (25) SPRAYBOOTH TECHNICAL SPECIFICATION SHEET



TECHNICAL SPECIFICATION	
<b>Dimensions</b>	Internal External 6920mm x 4000mm x 3030mm high 7018mm x 4080mm x 3530mm high
<b>Options</b>	Length Width Height 8071mm / 9224mm / 10377mm (internal) Specials to order 4500mm (internal) 3030mm / 3600mm / 4000mm (internal)
<b>Air handling Plant</b>	Position Rated air-flow Air movement Burner Burner type Fans Floor standing or roof mounted 25,000 m³/h - 5.0 air changes per min Down draught; ceiling input; floor extraction Direct gas fired – natural gas or LPG. 212 kW Fully modulating gas burner Direct drive centrifugal type with aluminium impellers
<b>Filtration</b>	Input Filter area Input filter type Extract filter type Full length and full width input filter Resin applied 600g – 10 micron – EU5 Duplex fibreglass and polyester fibre (less than 10mg/m³)
<b>Air Temperature</b>	Spray Bake Flash off Rise 22°C (typical) adjustable. 80°C (maximum 100°C) 37°C (typical) adjustable 25°C above external ambient



<b>Fan motors</b>	Input & Extract 7.5 kW – efficiency 1 – 415V three phase
<b>Lighting</b>	Standard Lux level Ballast Ultralux fittings with high lumen fluorescent tubes 1200 lux High frequency electronic. No maintenance.
<b>Floor</b>	Standard Fully extracted and gridded floor
<b>Energy saving</b>	QADS FS Mode Variable air flow Optional auxiliary air moving system (40% saving) Optional automatic recirculation system Optional automatic 4 speed VSD system (See spraybooth running cost sheet for detailed energy savings)
<b>Noise</b>	Internal cabin Nominal 76 – 78 dBA. Meets the latest HSE legislation
<b>Services</b>	Electrical supply Gas input Gas pressure 45 A / 415V / 50Hz TP + neutral Natural gas 19.4 m³/h / LPG 8.15 m³/h Min – 15mbar Max – 21mbar

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## 5 SERIES (30) SPRAYBOOTH TECHNICAL SPECIFICATION SHEET



TECHNICAL SPECIFICATION	
<b>Dimensions</b>	Internal External 6920mm x 4000mm x 3030mm high 7018mm x 4080mm x 3530mm high
<b>Options</b>	Length Width Height 8071mm / 9224mm (internal) Specials to order 4500mm (internal) 3030mm / 3600mm / 4000mm (internal)
<b>Air handling Plant</b>	Position Rated air-flow Air movement Burner Burner type Fans Floor standing or roof mounted 30,000 m³/h - 6.0 air changes per min Down draught; ceiling input; floor extraction Direct gas fired – natural gas or LPG. 260 kW Fully modulating gas burner Direct drive centrifugal type with aluminium impellers
<b>Filtration</b>	Input Filter area Input filter type Extract filter type Full length and full width input filter Resin applied 600g – 10 micron – EU5 Duplex fibreglass and polyester fibre (less than 10mg/m³)
<b>Air Temperature</b>	Spray Bake Flash off Rise 22°C (typical) adjustable. 80°C (maximum 100°C) 37°C (typical) adjustable 25°C above external ambient
<b>Fan motors</b>	7.5 kW – efficiency 1 – 415V three phase
<b>Lighting</b>	Standard Lux level Ballast Ultralux fittings with high lumen fluorescent tubes 1200 - 1500 lux High frequency electronic. No maintenance.
<b>Floor</b>	Standard Fully extracted and gridded floor
<b>Energy saving</b>	QADS FS Mode Variable air flow Optional auxiliary air moving system (40% saving) Optional automatic recirculation system Optional automatic 4 speed VSD system (See spraybooth running cost sheet for detailed energy savings)
<b>Noise</b>	Internal cabin Nominal 76 – 78 dBA. Meets the latest HSE legislation
<b>Services</b>	Electrical supply Gas input Gas pressure 45 A / 415V / 50Hz TP + neutral Natural gas 23.8 m³/h / LPG 10.0 m³/h Min – 15mbar Max – 21mbar



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# 5 SERIES (35) SPRAYBOOTH TECHNICAL SPECIFICATION SHEET



TECHNICAL SPECIFICATION	
<b>Dimensions</b>	Internal External 6920mm x 4000mm x 3030mm high 7018mm x 4080mm x 3530mm high
<b>Options</b>	Length Width Height 8071mm / 9224mm (internal) Specials to order 4500mm (internal) 3030mm / 3600mm / 4000mm (internal)
<b>Air handling Plant</b>	Position Rated air-flow Air movement Burner Burner type Fans Floor standing or mezzanine mounted 35,000 m³/h – 7.0 air changes per min Down draught; ceiling input; floor extraction Direct gas fired – natural gas or LPG. 300 kW Fully modulating gas burner Direct drive centrifugal type with aluminium impellers
<b>Filtration</b>	Input Filter area Input filter type Extract filter type Full length and full width input filter Resin applied 600g – 10 micron – EU5 Duplex fibreglass and polyester fibre (less than 10mg/m³)
<b>Air Temperature</b>	Spray Bake Flash off Rise 22°C (typical) adjustable. 80°C (maximum 100°C) 37°C (typical) adjustable 25°C above external ambient



<b>Fan motors</b>	Input & Extract 11 kW – efficiency 1 – 415V three phase
<b>Lighting</b>	Standard Lux level Ballast Ultradux fittings with high lumen fluorescent tubes 1200 - 1500 lux High frequency electronic. No maintenance.
<b>Floor</b>	Standard Fully extracted and gridded floor
<b>Energy saving</b>	QADS FS Mode Variable air flow Optional auxiliary air moving system (40% saving) Optional automatic recirculation system Optional automatic 4 speed VSD system (See spraybooth running cost sheet for detailed energy savings)
<b>Noise</b>	Internal cabin Nominal 76 – 78 dBA. Meets the latest HSE legislation
<b>Services</b>	Electrical supply Gas input Gas pressure 63 A / 415V / 50Hz TP + neutral Natural gas 27.5 m³/h / LPG 11.6 m³/h Min – 15mbar Max – 21mbar

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## 5 SERIES SPRAYBOOTH OVEN FEATURES

### Construction

- Quality construction and modern, clean appearance.
- White polyester paint finish on galvanised steel substrate for excellent corrosion resistance and a light working environment.
- Wall and roof panels are sealed internally for cleanliness.
- Fully glazed vehicle doors for enhance appearance.
- Wide vehicle door opening for ease of loading / unloading.
- Full width and full length input filter for improved air-movement.
- Filter media is quick and easy to change by one person.

### Lighting

- Lighting levels:
  - Ultralux      1200 – 1500 lux – Aluminium reflectors.
  - Ultralux lighting reduces the air-flow dead zone to a minimum.
  - High frequency electronic light ballasts save energy, extend tube life and provide more light output.
  - Lights are maintained from inside the spraybooth for ease of access.

### Performance

- Designed for use with 2007 compliant coatings. With Junair QADs, jobs are produced faster, with more consistent results than conventional spraybooth oven equipment. Typically total process times are reduced by 33%.
- Direct gas firing with fully modulating burner. Fast temperature rise and accurate temperature profiling. Direct firing saves approximately 30% of fuel cost compared to indirect fired systems.
- Quiet in operation. Direct drive centrifugal fans.
- Fully extracted floor is the ultimate spraybooth extraction system. The best system for painting and curing off car panels in conjunction with the vehicle.
- Optional I System PLC control option with patented "Select Control" function where each paint type has a pre programmed profile. More consistent results.

### Energy Efficiency

- Energy efficient options include; (see running cost sheet for details)
  - QADs auxiliary air moving System
  - FS Mode – automatic recirculation for idle and flash off
  - Variable airflow with automatic 4 speed variable speed drives.
- Efficient energy efficient motors fitted as standard.

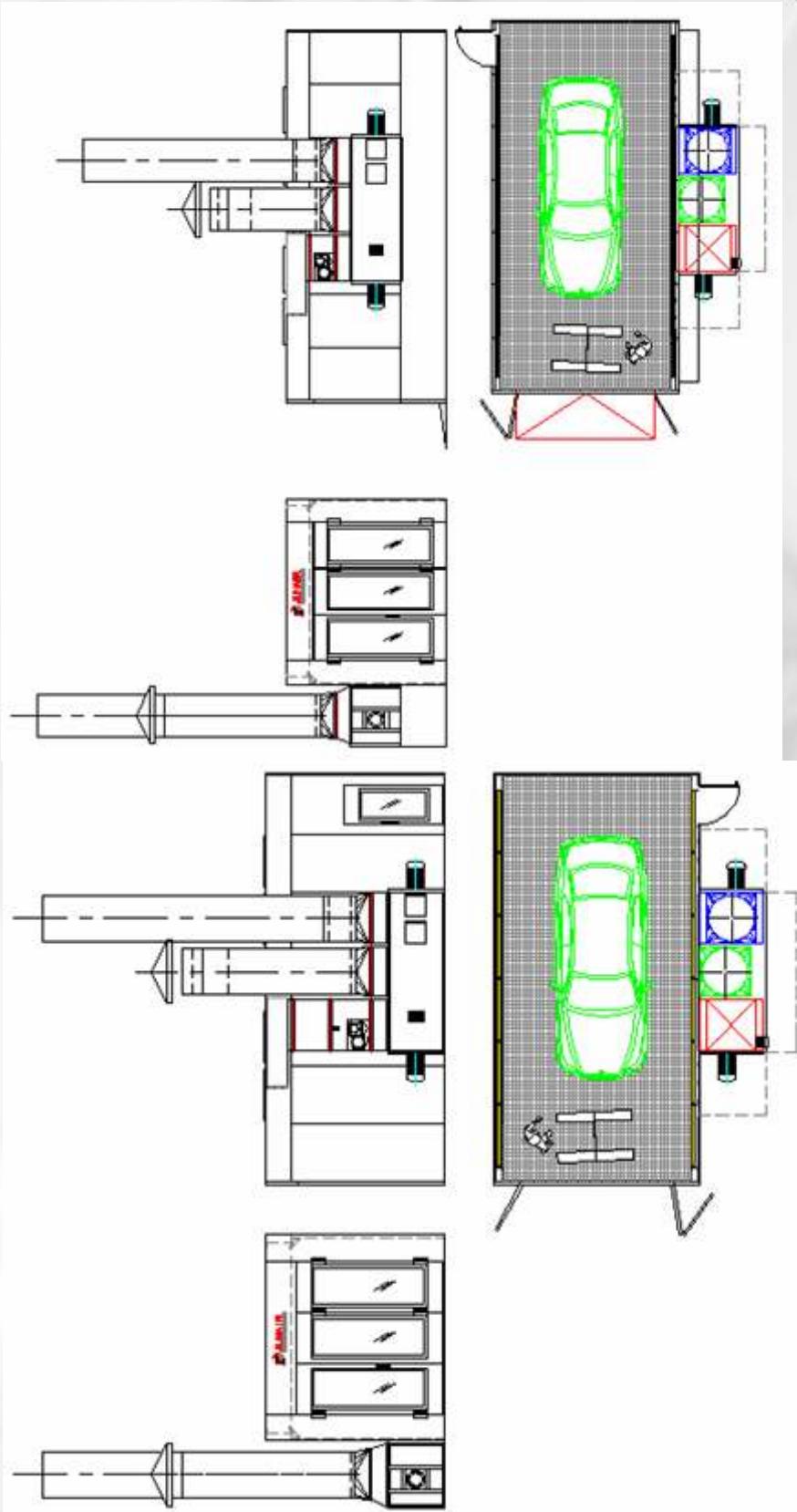
### Warranty, Service and Support

- A 3 year warranty is offered with a service support package.
  - Skilled engineers provide national service support with maintenance divisions based in the South, Midlands, North West and Scotland.
- ### Legislation
- Designed, manufactured and installed to meet Government legislation; EU Machinery Directive - CE, COSHH, Environmental Protection Act, Health and Safety at Work Act, ATEX.

## 5 SERIES

### EVAC FLOOR

### LEVAC FLOOR



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