



## 1000 SERIES SPRAYBOOTH &amp; OVENS

The Todd Engineering Titan CV series spray booth is designed to fulfil the requirements for the refinishing of large commercial vehicles and other larger bespoke industrial and commercial processes. The design and layout can be tailored to customer requirements in terms of extraction, access doors, plant layout and internal dimensions. The spraybooth features full low bake facility, inverter variable speed drives and LED lighting as standard, high performance fans ensure overspray is effectively removed during the spraying process.

### Layout

The 'Titan' has been designed to offer the customer total flexibility on the choice of layout. In terms of extraction the Titan can be configured as either rear extraction, single or twin side extraction or full draught extraction. Internal dimensions can be made to any length, width or height, with various plant positions such as rear, side or roof mounted options. The cabin can feature centre split doors to provide two independently operated cabins which can also operate together for larger jobs, cabin dimensions are tailored to customer requirements.

### Construction

The spray booth cabin has a fire resistance of 30 minutes and is constructed using double skinned rock-wool insulated panels with a white polyester finish both internally and externally, a steel 'A' frame superstructure provides primary support for the spraybooth cabin.

### Performance

The spraybooth plant work is fitted with a combination of high performance direct drive aerofoil fans to provide a minimum of 2 air changes per minute with extracted air being exhausted to atmosphere. The extraction system is fitted with two stage filtration incorporating 50mm EU2 paint stop filter and EU3 blue pre-filter; this ensures that emissions meet EPA requirements. Input air is filtered through high quality EU5 filter media housed in the full ceiling plenum, which captures contaminants down to 10 microns.

### Lighting

Todd Engineering have developed a state-of-the-art LED lighting system specifically for use in our range of spraybooths that meet and surpass the very highest standards required in the automotive refinishing sector. The cabin is superbly lit with high level light pods which are angled to reduce glare and shadowing, these pods are outfitted with a state-of-the-art LED lighting system that gives illumination levels in excess of +1800 lux through the use high output LED SMD Chips designed to give colour temperature of 5000K @ 90CRI which offers unrivalled lighting quality when colour matching. These LED's consume 50% less energy than conventional tubes with an equivalent light output and operate via an external low voltage driver at 36VDC. The lighting is fitted with a hi-tech laser etched 'Luminit' film which removes the visual appearance of each individual LED and creates a flat panel of light which is distributed and angled to prevent glare and shadowing. The light pods are finished with a frameless toughened glass cover and intumescent seal to separate electronics from the booth atmosphere.

### Spraying Cycle

Fresh air is drawn from the 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

The spraybooth is fitted with multiple state of the art direct fired modulating gas/LPG premix burners, each with an output of 220kW or 750,000Btu's/hr; this allows input air to be rapidly heated to the pre-set temperature on the control panel, cabin temperature is then held within +/- 1 degree. Modulation is achieved using integrated variable speed drive technology for greater control and efficiency of the heating plant.

### Noise Levels

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

### Main Doors

The main vehicle entry doors are fully insulated, 3 phase electrically operated roller shutter doors with a white internal/external powder coated finish. The doors are fitted with rubber compression seals across the bottom threshold and internal seals down both vertical guides, an additional seal is provided by nylon brush strips around all internal edges.

### Personnel Door

Additional personnel doors can be fitted to any wall panel to provide a safe fire escape route. The door is fitted within its own white powder coated frame complete with self-closer, dictators, full length viewing window, extruded aluminium hinges and rubber compression seals.

### Control Panel

The control panel is fitted with variable speed drives to The Spraybooth control system uses the latest technology available to give the operator intelligent and user friendly control of all processes. Simple push button controls are used for cycle selection and lighting, meaning in most cases the booth can be controlled with one touch of a button. The intelligent programming of the PLC based system monitors and adjusts cabin pressure and temperature to suit and displays the current spraybooth status on a 3.5" full colour TFT Touchscreen display. Separate controllers for temperature and cycle time duration are fully adjustable by the operator and give clear indication of set points, current temperature and remaining process time.

### Inverter Variable Speed Drives

All Todd Engineering spraybooths are fitted with Inverter variable speed drives to electronically balance cabin pressure, this is achieved by controlling the fan speeds using the inverters. This method of control is beneficial in maximising the energy efficiency of the spraybooth by only running the fans the speed required by the process. The inverters also increase the life expectancy and reduce maintenance of all associated components



<b>Titan Specifications</b>	
Standard Model Overall Dimensions (LxWxH) - Internal	18000mm x 5000mm x 5500mm
Standard Model Overall Dimensions (LxWxH) - External	18200mm x 5400mm x 6200mm
Power Supply / Load	400VAC 3Ph/N/E (50/60Hz) / 63A
Maximum Absorbed Power	5kW
Gas Supply	Natural Gas or LPG
Gas Rated Power (kW/BTU'S)	220kW/750,000BTU's/hr
Natural Gas Consumption	14m <sup>3</sup> /hr
LPG Consumption	6.5kg/hr
Pneumatic Supply	5 bar
Airflow	35,000m <sup>3</sup> /hr
Extraction Type	Twin Side Extraction
Fan Type / Rated Power	Aerofoil Backwards Curved Centrifugal / 7.5kW
Inverter Variable Speed Drives	Yes
LED Lighting	Yes - 5000K/90CRI/+1800lux