

FAN DECK SERVICES

MANUFACTURE & REFURBISHMENT

Manufacture

Our speciality is being able to manufacture new fan decks of any quantity to your specification. Our facilities enable us to replace old and obsolete decks which otherwise would require a complete new system installation.

When looking at having a fan deck manufactured there are several different versions from a single scroll unit with an internal motor to a quadruple scroll with two external motors or even four internal motors. With our extensive stocks we are able to produce fan decks to your specific requirements.

Refurbishment

In many buildings fan coils have been running for 20-30 years, the bearing and motors start to fail and the moving parts of the fan deck reaches the end of its life. Engineers look at the options of refurbishing the units. In most situations the tray, scrolls and wheels are in perfectly good condition and it is just the motor that has failed. As a result refurbishment is often a far cheaper and quicker option than manufacturing complete new units.

With our vast stocks of fan coil motors there are very few units which we are unable to refurbish. We ensure all fan decks are refurbished to the highest standard to ensure they retain their original performance.

In some sites there is a need for instant fan deck replacement such as hotels, we are able to provide pattern fan decks to be used as a buffer stock on site for fast servicing.

- No minimum quantity
- Match old designs
- Full warranty



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Fan decks come in four main designs, a single, a double, a treble and a quadruple scroll unit. They can then be sub divided depending upon the number of motors used to drive the wheels. Due to our stock holding there are very few units which we cannot replace or repair. Below are a list of the most commonly found variations of fan deck units.

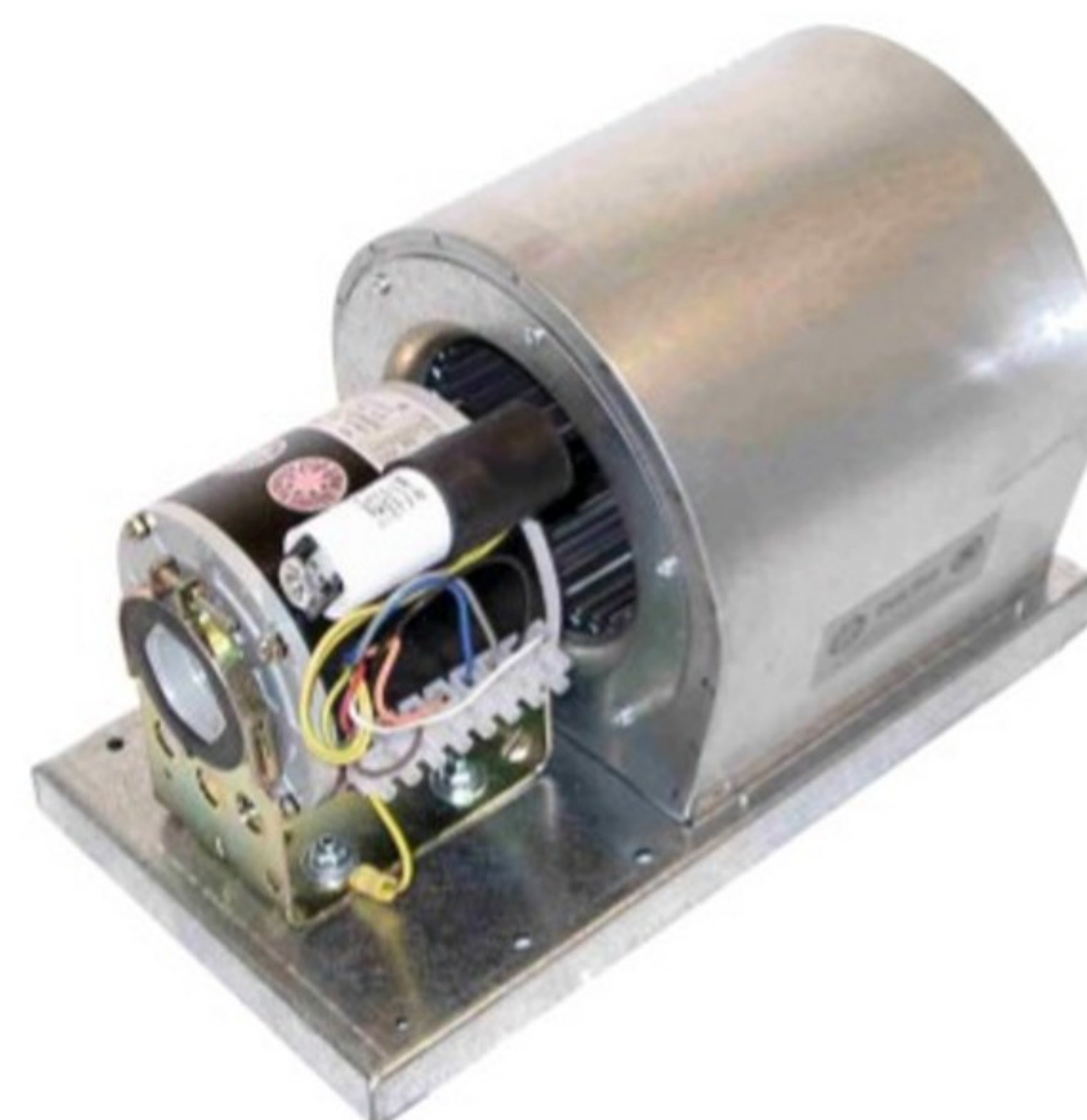
Type A

A single scroll blower driven by an external rotor motor, 2 and 4 pole with 1 to 4 speeds available. This is the most compact of designs.



Type B

A single blower is driven by single shaft PSC motor, 2, 4 or 6 poles, 1 to 6 speeds via a resilient base mounted motor for reduced noise and vibration levels. Air volumes up to a maximum of 1000 m³/hr or 600cfm.



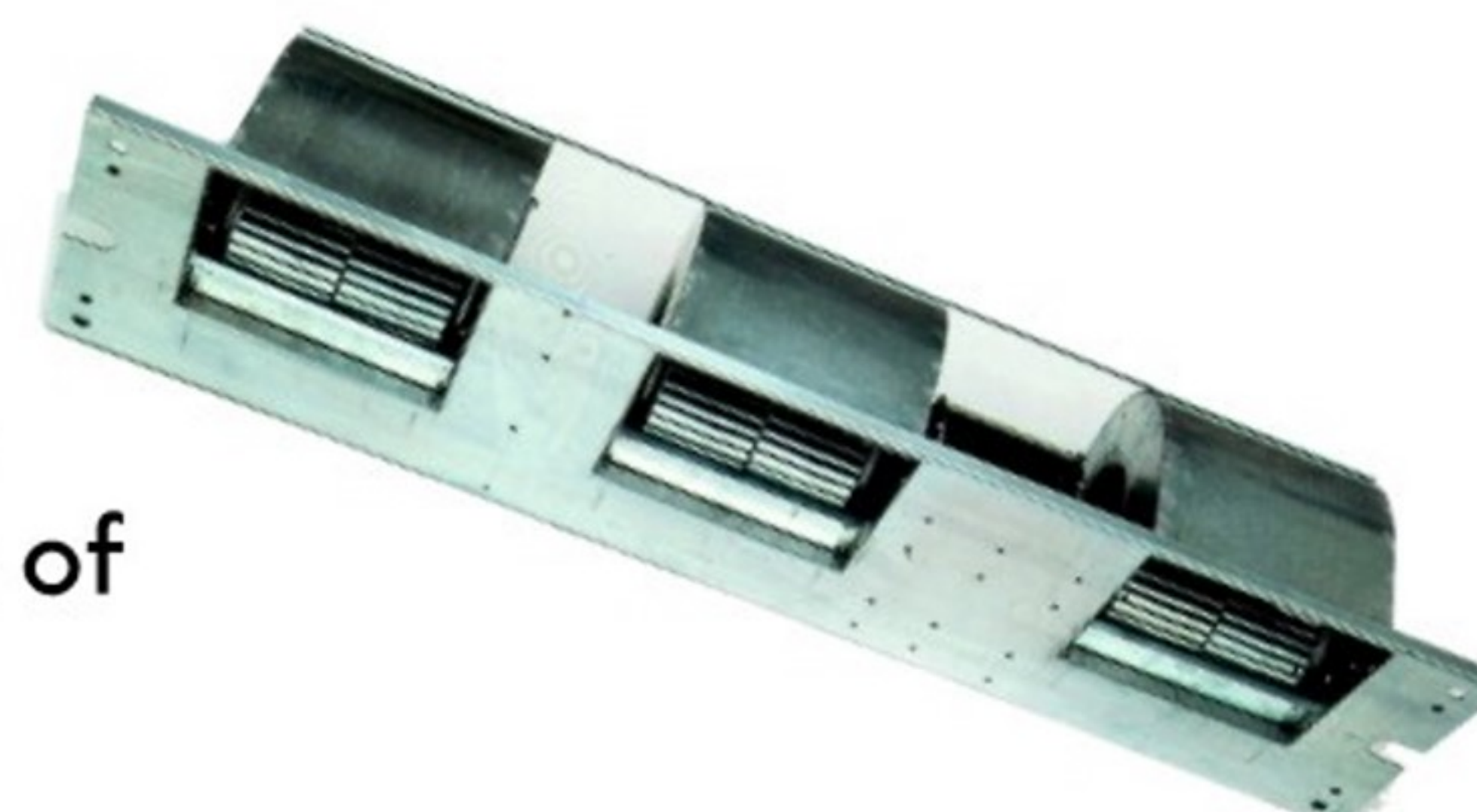
Type C

A double blower is driven by double shaft PSC motor, 2, 4 or 6 poles, 1 to 6 speeds, using resilient mounting base, motor power from 30W to 420W, impellers 108mm to 238mm diameter. Air volumes up to a maximum of 3000 m³/hr or 1800cfm.



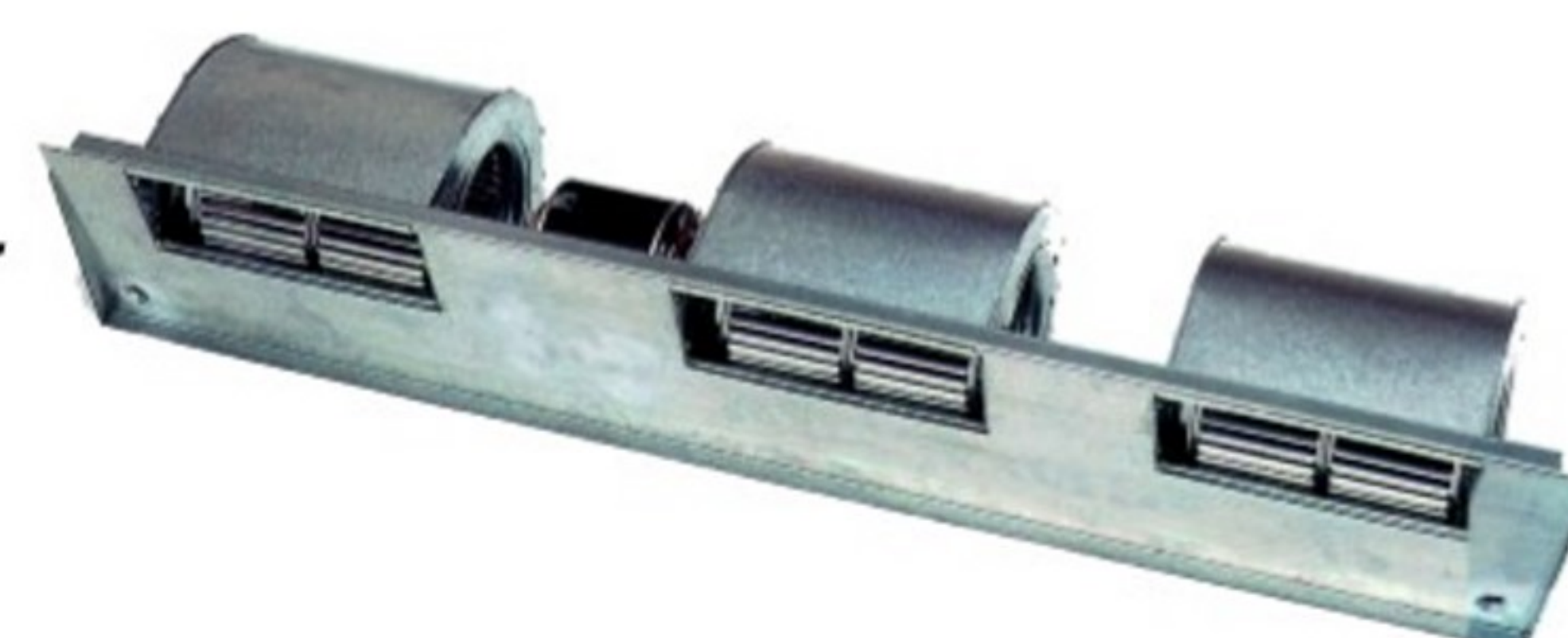
Type D

Triple blower is driven by double shaft PSC motor, 2, 4 or 6 poles, 1 to 6 speeds, using resilient mounting base, coupling to third impeller. Air volumes up to a maximum of 7000 m³/hr or 4200cfm.



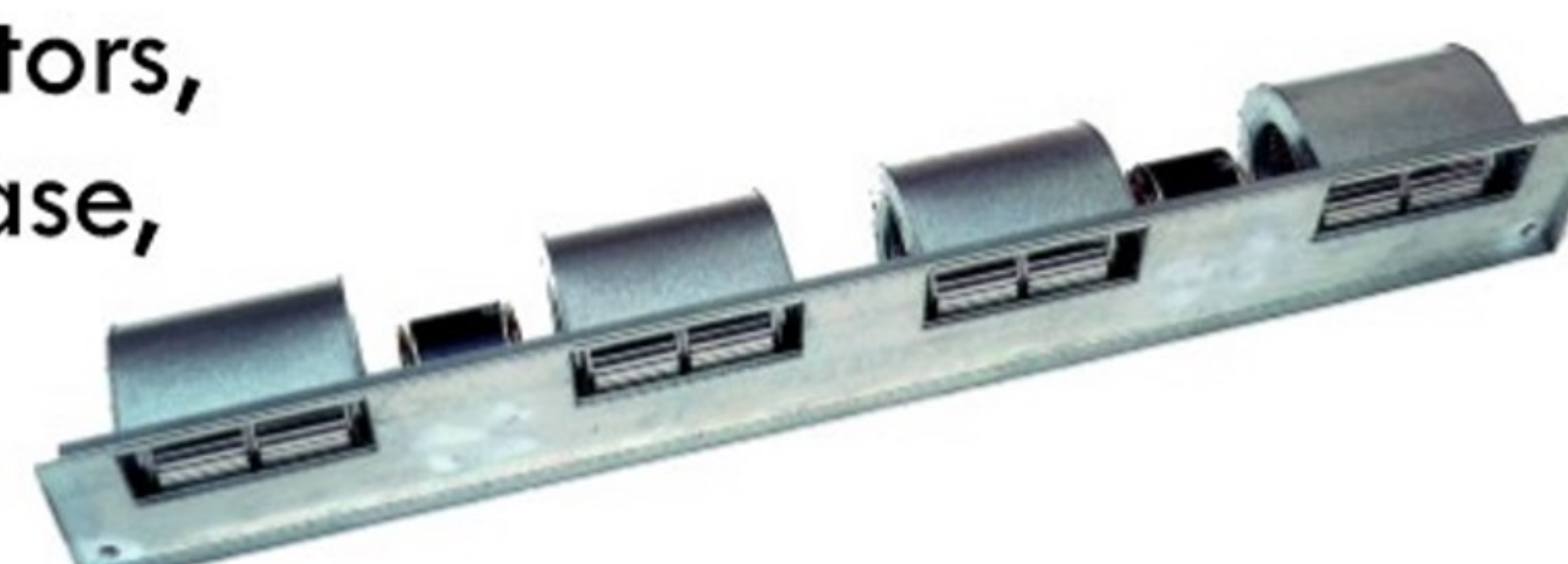
Type E

A triple blower which is driven by two PSC motors, 2, 4 or 6 poles, 1 to 6 speeds, using resilient mounting base. Air volumes up to a maximum of 7000 m³/hr or 4200cfm.



Type F

Quadruple blower is driven by two double shaft PSC motors, 2, 4 or 6 poles, 1 to 6 speeds, using resilient mounting base, motor power from 30W to 420W, impellers 108mm to 238mm diameter. Air volumes up to a maximum of 8000 m³/hr or 4800cfm.



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Refurbishment – The stages

We are often asked what steps we take when refurbishing old and obsolete units.

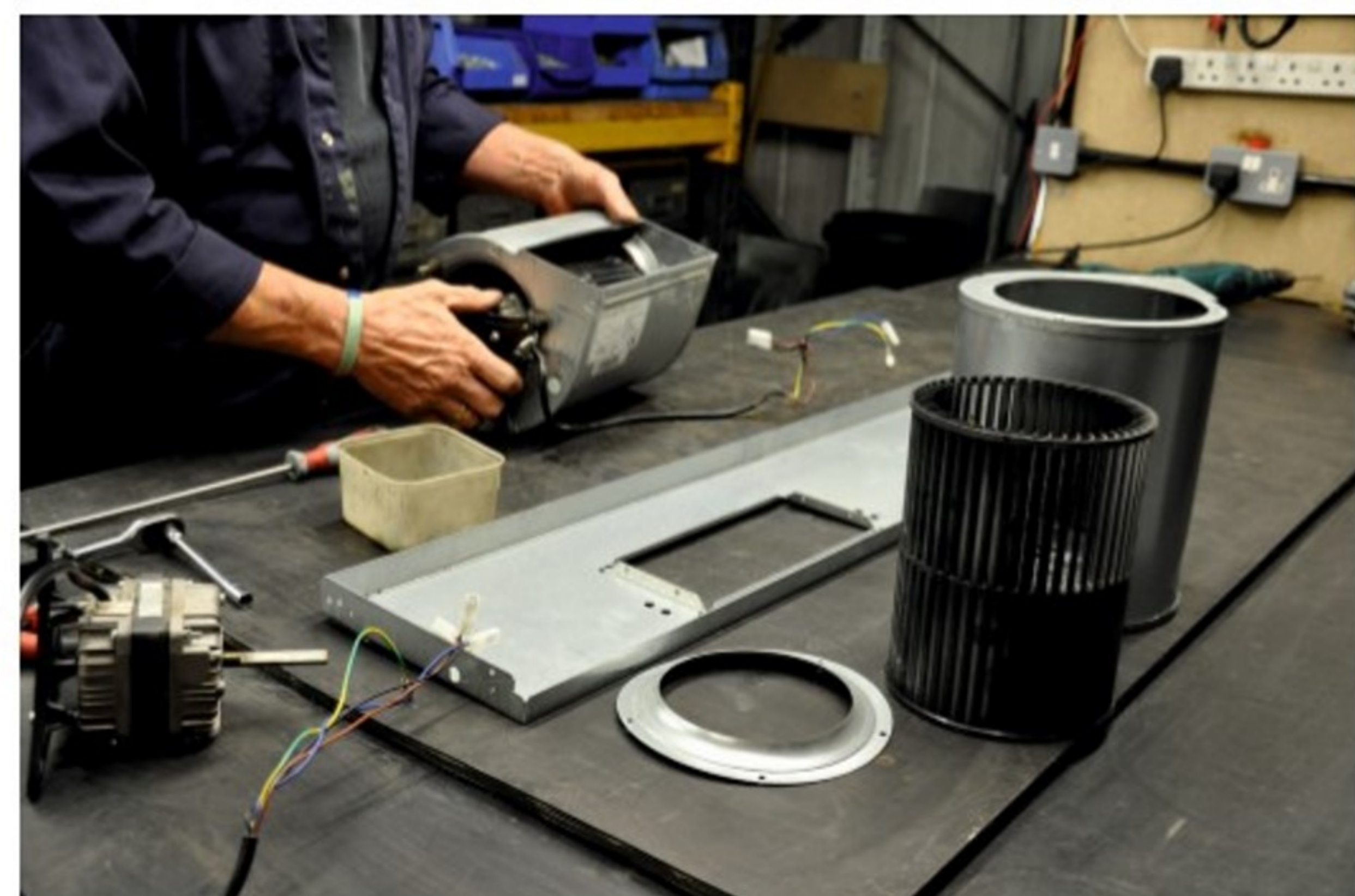
Step one

Once the units have been delivered/collected they are first cleaned, depending upon the level of dirt they can be pressured washed or/and chemically dipped overnight.



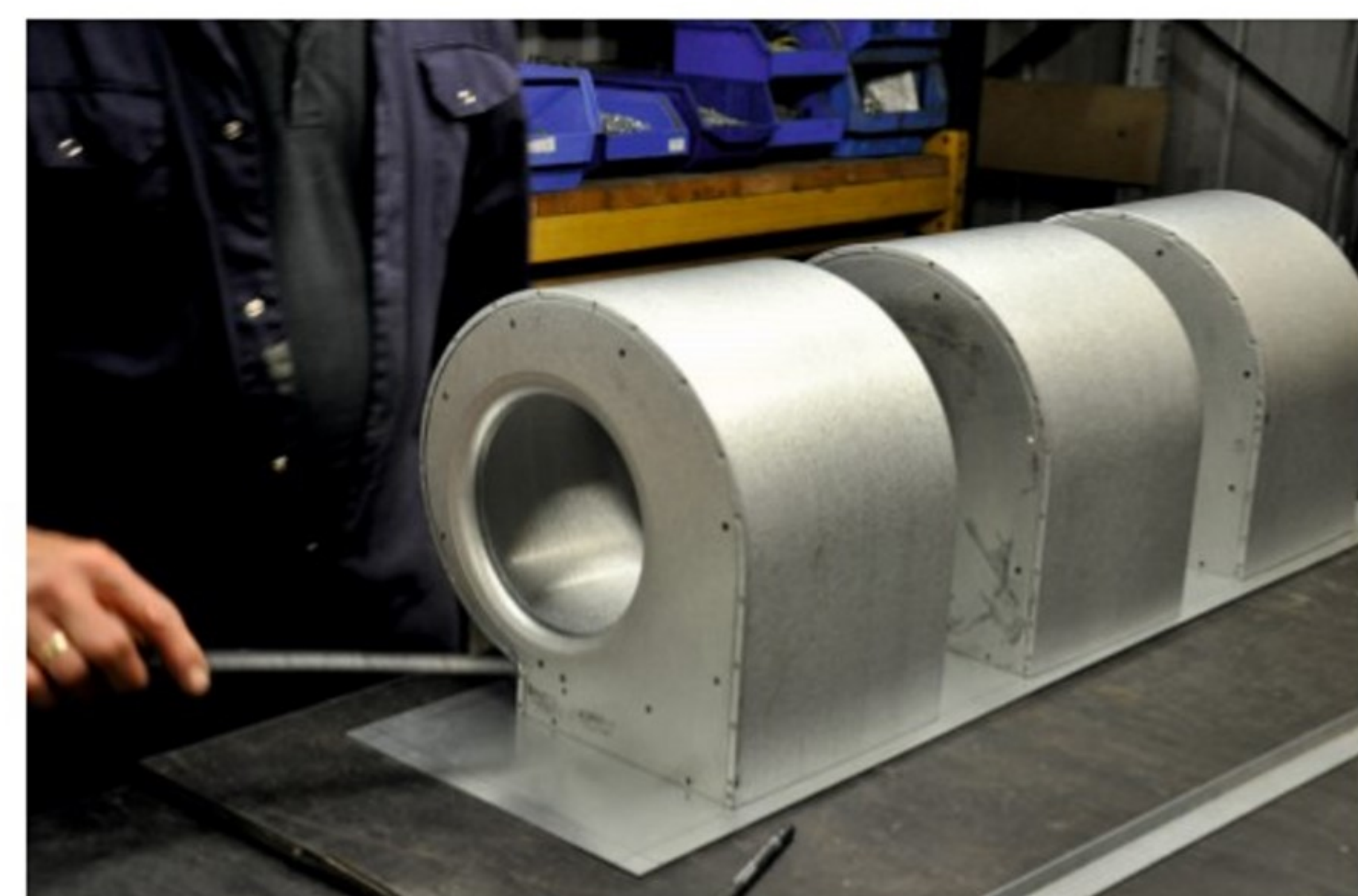
Step two

Once sufficiently clean the units are stripped and the wheels are assessed for damage or out of balance issues. The majority of the time wheels can be re-used but it is only when the units have been received can we give a 100% accurate quotation.



Step three

Once a quotation has been approved and an order raised the units are re-assembled, we always use a new motor even if the original supplied was still in working order (unless requested). If any additional controls or switches are required they are installed at this stage.



Step four

Finally the units are now electrically tested on each output speed and the impellers checked to ensure they are balanced. Once checked the units are then dispatched in safe and secure packaging.



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In conjunction with the fan deck services we offer we are able to offer a selection of the most commonly used controls for fan decks. The available accessories give you the choice to control your fan unit with simple manual switches or via a selection of thermostats to obtain an automatic control.

Manual Switches

These enable the user to change the fan motor speed when used in conjunction with a multi speed fan motor or an autotransformer. We keep a variety of rocker switches and a more robust rotary type switch ranging from a simple on/off to multiple speed selection.



Speed Control

We currently have 2 types of autotransformer for use with any single phase fan motor up to 75watt or 100watt output. These units allow up to seven speeds to be used on a standard single speed motor. They are usually used in conjunction with the manual type switches above or the thermostatic controls below.

Thermostatic Type Controls

Pipe Thermostat

These are designed to clip onto the pipes that feed the fan coil. The pipe thermostat acts as a switch and prevents the fan motor from starting until the pipes become hot (around 50 deg C) thus preventing cold air from being blown into the room. They are usually used in conjunction with the capillary action thermostats below.



Capillary Action Thermostat

The capillary action thermostat can be used in a number of ways but is usually used as a stand alone control to switch the fan deck off when a user set temperature is reached. They can also be wired in series to automatically control the speed of a fan unit. When a room is cold the thermostat will select a high speed to blow warm air quickly into the room, once the room has reached a user set temperature the thermostat will switch the fan motor automatically to a slower speed giving a more gentle background heat. The second thermostat switches the fan unit off when a user set temperature is reached.



Variable Speed Controls

This type of control gives stepless speed variation to a motor but must be used with care. The controller works by reducing the input power to the motor and if turned down too low will cause it to overheat and burn out or drastically reduce the life of the motor. It is also very important to select the correct amp rating for your motor when purchasing these controls, if you are unsure please speak to a member of the sales team.



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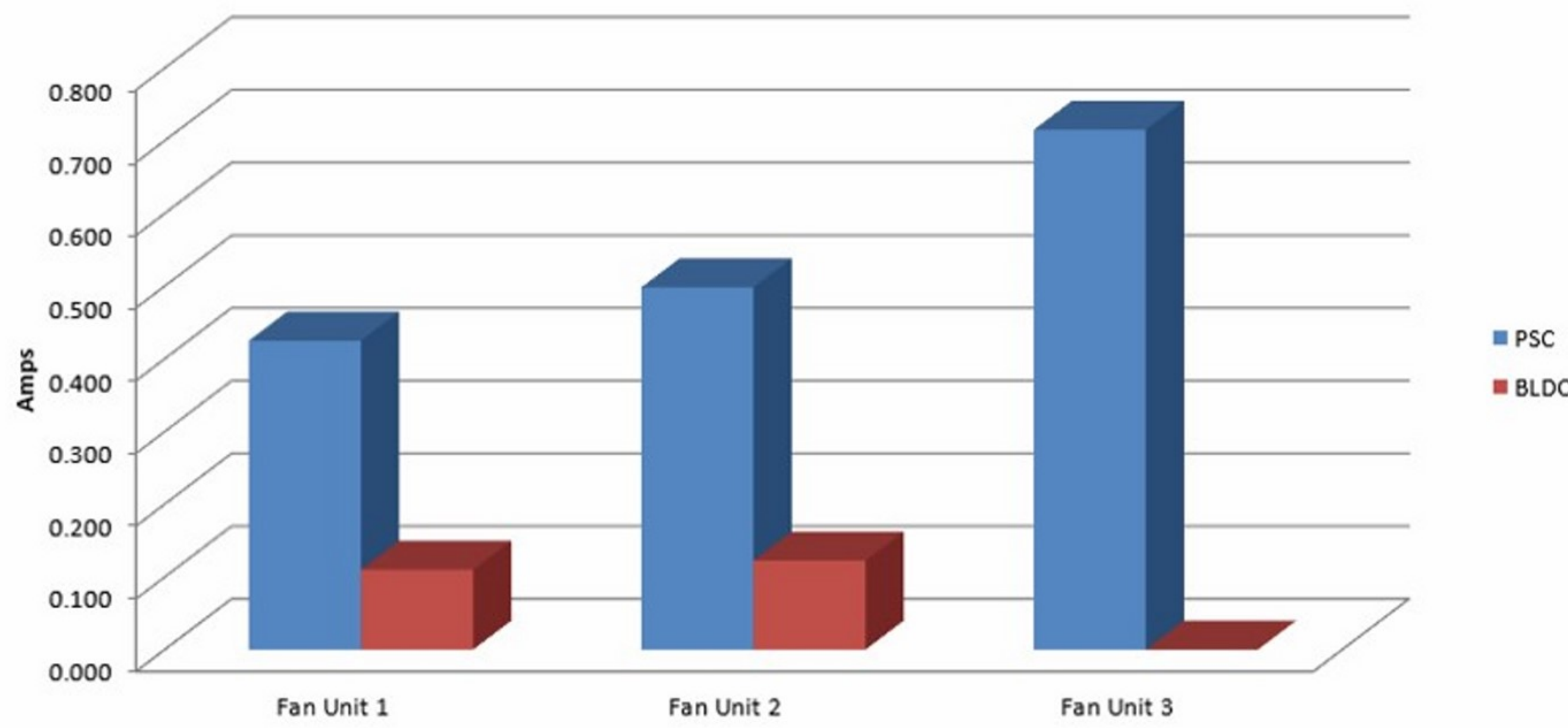
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Upgrading to a BLDC fan deck

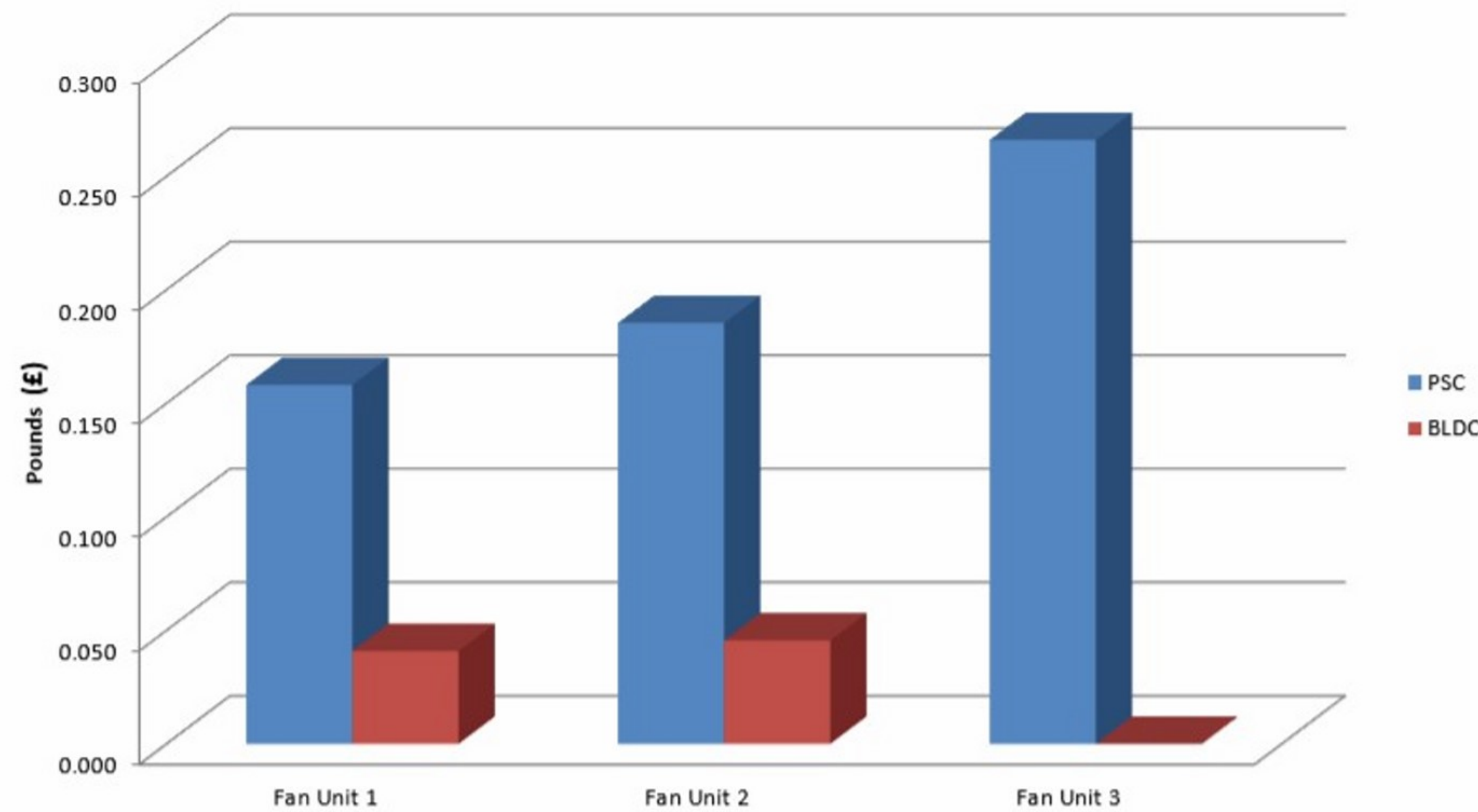
There are a number of benefits of moving from a conventional capacitor (PSC) motor to a high efficiency BLDC motor, but the main factor is cost savings. Shown below is a case study highlighting the annual savings of a fan deck with a 180W motor compared to a BLDC driven motor. Both units have the same performance but over a years constant use the savings would be £56,457.32.

Due to our facilities we are able to either retrofit a BLDC motor on an existing tray in a refurbishment upgrade or we can manufacture a new deck to your specification.

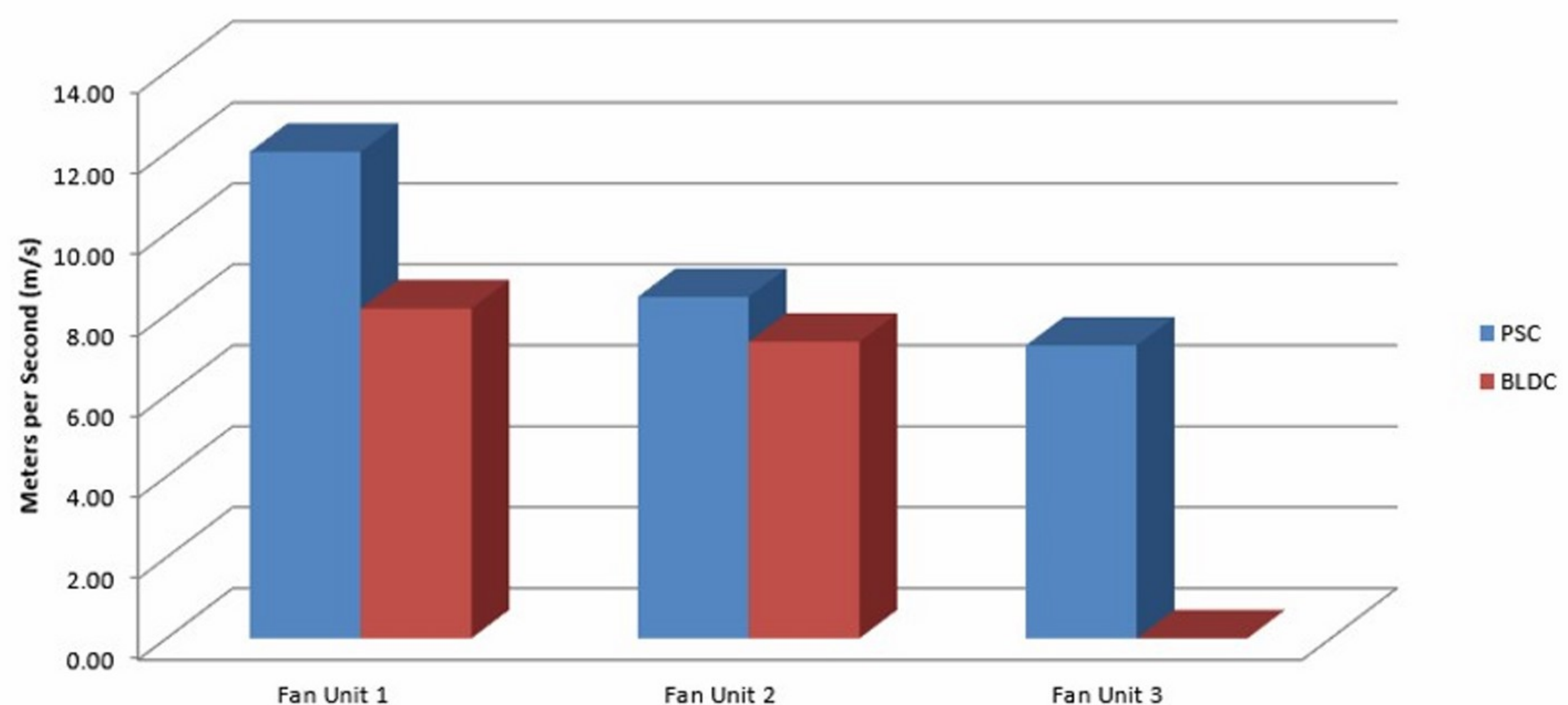
Power Consumption



Running Costs/Day



Air-Flow Data



Consignment stock

A valuable service which we offer to mainly hotels is our fan deck consignment stock, in order to limit the downtime of a room and thus the income it provides we are able to produce new fan decks to the design of old unit. These units can then either be kept on stock at the hotels location or if storage space is an issue we can hold the fan deck on stock here and offer a next day delivery service.