



dark matter composites ltd

DUST & FUME EXTRACTION BENCHES

These units have been specifically designed as an all in one solution for composite processing where dust and fume extraction are required. Typical composite processing applications include:

- Sealing and release agent application
- Laminating
- Surface cleaning
- Bonding surface preparation
- Trimming & finishing using manual and power tools
- Repair surface preparation using manual and power tools



Re-circulating unit requiring no make-up air

Dust extraction filters are washable pre-filters & disposable EU8/F8 particulate filters

Fume extraction filter is acetone compatible activated carbon filter fitted after the dust filters

Easy cleaning and maintenance as the materials used are resistant to the chemicals used in composite processing. Stainless steel frames, laboratory grade work tops, composite housings and sacrificial polypropylene surfaces make the benches easy to clean so they will look good in years to come.

CE marked and compliant with HSG258 'Controlling Airborne Contaminants at Work', and other relevant regulations.

DMP0101, Composite Processing Extraction Bench

Large work surface with side mounted extraction unit and 465x365mm extraction grid, this bench is particularly suited to small companies, laboratories and training facilities.

Price £2,625.00 ex-works, plus applicable taxes/duties

Lead time 4-6 weeks, made to order



DMP0102, Composite Processing Extraction Bench - Large

With a higher capacity, centrally mounted extraction unit and 730x465mm extraction grid, this bench is particularly suited to larger parts for R&D and repair facilities and small production facilities.

Price £3,675.00 ex-works, plus applicable taxes/duties

Lead time 4-6 weeks, made to order





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The Workbench

- The overall workbench size is 1505mm wide x 905mm deep x 800mm high
- The overall worktop surface is 1500mm wide x 900mm deep
- The workbench frame is brushed finish stainless steel and is a welded box/angle section construction
- The worktop and shelf are chemical resistant composite laminate, white in colour and fitted on the workbench frame
- A sacrificial work surface is fitted on top of the worktop, 3mm white polypropylene
- The workbench work surface and shelf are suitable for distributed loads up to 75kg
- All materials are compatible with typical chemicals used in composite processing and can be easily cleaned and maintained
- The extraction unit is integrated with the workbench frame and worktop



The Extraction Unit

- The extraction unit consists of a main housing and a capture housing fitted to the workbench frame beneath the worktop
- The inlet aperture is fitted with a removable cover plate and composite extraction grid
- The open aperture grid and vertical filter arrangement allows for capture and containment of pre-filtered heavy dust, debris and liquid spills within the capture housing
- The capture housing is accessible from the inlet aperture and front of the workbench and is removable to allow for maintenance and cleaning
- The exhaust outlet is at the rear of the workbench and requires 150mm/6" clearance to the rear
- The filters are accessed for cleaning and changing by opening the capture housing from the front of the workbench
- The housings, extraction grid and cover panel materials are compatible with typical chemicals used in composite processing and can be easily cleaned and maintained





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Fan/Controller Assembly

- Fitted within the extraction unit
- CE certified 5 speed fan/controller assembly with 3m flying lead, suitable for 230v, 50Hz electrical supply fitted with 13amp fuse
 - Setting 1 – for fume extraction
 - Setting 2 – for wet or dry cutting, grinding and abrading of composite materials using hand tools
 - Setting 3 to 5 – for dry cutting, grinding and abrading of composite materials using power tools
- The speed controller is mounted on the side of the extraction unit



Extraction Unit Filters

Each extraction unit is supplied with a complete filter set consisting of:

- Washable foam pre-filter with galvanised steel frame, for capture of coarse dust to extend the life of the panel filter
- EU F8 grade disposable pleated panel filter for capture of fine dust
- Disposable activated carbon filter, for capture of organic vapours
- The pre-filter and panel filter are used for both dust and fume extraction
- The carbon filter only needs to be fitted when fume extraction is required
- Filter condition gauge fitted to the side of the extraction unit to provide an indication of when the filters need to be cleaned and replaced
- Full filter specifications are available upon request



Maintenance

- The key maintenance activity is the regular cleaning of the unit and filters
- Replacement filters are anticipated to be required regularly (depending on maintenance and use this may vary from months to years)
- Please note that any Local Exhaust Ventilation (LEV) needs to be regularly maintained and checked by a competent person at regular intervals
- The design of the extraction unit allows this to be accommodated by the Customer's own competent staff or third party LEV inspectors

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Documentation

- Workbench & Extraction Unit User Manual
- Extraction Unit Log Book

Warranty

Twelve month return to manufacturer warranty, applicable to fan/controller assembly, filter condition gauge and manufacturing defects.

Advantages

- Single multi-purpose workbench
- Point of source extraction of dust and fumes
- Easy to install or re-locate
- No need to install ducting
- Re-circulating design does not warrant make-up air supply
- Ease of maintenance and low maintenance costs



Special Notice for Fume Extraction

- The extraction unit has been designed for safe area use only
- The extraction unit has been fully risk assessed and evaluated by 'SIRA Test & Certification Ltd' against conformity to explosion safety of equipment used in potentially explosive atmospheres (ATEX & IECEx).
- As part of the design, the extraction unit can be used to capture fumes from flammable solvent solutions, such as acetone/release agents, and has been declared as non-hazardous, provided the following conditions are adhered to:
 - A minimum of five air changes per hour (typical office ventilation) is required in the room in which the unit is installed
 - The activated carbon filter is fitted
 - No more than 100ml of flammable solvent solution is used with each DMP0101 bench
 - No more than 200ml of flammable solvent solution is used with each DMP0102 bench

