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## Dust Control Systems Ltd DCS C/L1/7 x 4 Dust Extraction Unit



**Stock Code:** EB1913JS

**Manufacturer:** Dust Control Systems Ltd

**Model:** C/L1/7 x 4

**Year of Manufacture:** 2004

**Serial:** 16073

**New or Used:** Used (Second Hand)

**Approx Duty CFM / M<sup>3</sup>/Hr :** 7,500 // 12,650

**Filter Area ft<sup>2</sup> / m<sup>2</sup>:** 4219 // 392

**Other Info:** Explosion relief and 3 off 7.5kw Fans

**External Dimensions (WxDxH):** 3600 x 2200 x 6300

DCS C/L1/7x 4 28 Cartridge - Dust Extraction Unit Operating Principles

The DCS 'C' series air pulse system comprises of cylindrical cartridges filter elements, manufactured from polyester fabric and supported by flexible polyurethane castings.

Contaminated air is drawn through the filter elements, the contaminant is then deposited on the outer surface of the filter elements (efficiencies of up to 99.99% can be achieved).



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Cleaning out of the filter elements is achieved by pulsing compressed air through jet tubes mounted on the clean side of the filter element.

The momentary reversal of air flow caused by the 'Air Pulse' creates an expansion of the filter element sufficient to break and dislodge the matrix of contaminant that had developed on the outer surface of the filter element.

### Design Construction

Filter elements are mounted from the clean of dirty air plenum chamber depending on application.

The blow bar/jet tube assembly is locked into the diaphragm valve with a compression fittings and seals. The jet tube is drilled to suite the cartridge positions and is secured at the opposite end with standard fixings.

A dust-tight cabinet, mounted on the external casing of the plenum chamber contains the solid state pulse sequence controller, suitable for 110/240 volt single phase electrical supply. The solenoid valves are pre-mounted in this box and piped through bulkhead connectors to the diaphragm valves.

To feed the air pulse system a large capacity cylindrical air receiver is installed.

DCS 'C' Series Air Pulse Jet Filters require a constant supply of clean, dry compressed air and must be controlled by the regulator to maintain a pressure within the cylindrical air receiver.

DCS 'C' Series Air Pulse equipment is manufactured from heavy gauge steel sheets. All joints are of a welded or bolted construction, sealed prior to painting. A standard paint finish, utilising acidic based etch primer and semi gloss all-weather top coat can be employed.

DCS 'C' Series Filter Module utilises high efficiency cartridge filter elements manufactured from spun bonded polyester fabric. The filter module is mounted on a support steelwork structure to raise the rotary valve outlet to a suitable height above the bulk bag.

Filter Media Cleaning Fully Automatic Reverse Jet Unit for achieving continuous filter cleaning via intermittent pulses of compressed air. The compressed air is injected down the filter cartridges through a blow tube assembly mounted to the clean side of the filter cartridges in the clean air outlet plenum. The injection of compressed air is achieved via diaphragm valves operated by pneumatic solenoids.

The dust tight cabinet mounted on the plenum chamber contains a solid state pulse sequence controller, suitable for 110/240v single phase electrical supply. It will also contain the pneumatic control solenoids. The pulse sequence controller/solenoid assembly is factory-piped to the diaphragm valves.

The controller is complete with a selector switch to enable pulse cleaning off-line when your fan set has been shut down.

Filter Media Access filter media access is gained through front inspection doors of a bolt-on type.

Access Platform to facilitate maintenance of the filter plant there is a maintenance platform complete with British Standard handrailing, kicking flat and mezzanine type deck plates.



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Filter Body Construction made up of folded panels of 12-gauge mild steel sheet, all joints being of a welded or bolted type which are sealed prior to painting.

Dust Disposal at base of the filter module is fitted with a waste receiving hopper. This hopper has a single rotary valve waste outlet. The hopper will be mounted on steelwork manufactured from heavy gauge rolled steel angle and channel sections.

Rotary Valve Discharge Twill discharge waste from the hopper through a rotary valve. This rotary valve is specially designed to handle waste, having resilient Butyl rubber-tipped blades to prevent blockage and blade cracking.

The rotary valve is driven by its own 1.1KW geared motor assembly, suitable for an electrical supply of 415/3/50. This geared motor assembly is maintenance-free and sealed for life. There is a clearance of approx. 1500mm from the rotary valve outlet to floor level.

Starter Control Equipment features a fully sequenced control panel will be supplied with this filter plant. The control panel will be responsible for all operations of the filter plant in sequence. The control panel has the following features:

- a) Mains power on indication lamp.
- b) On/Off and run/trip lights for all electrical motors.
- c) All necessary contactors.
- d) All necessary overloads.
- e) Start and stop push buttons.
- f) Contactors fitted to allow remote start from each m/c to start main fans.

Extractly's Support

This machine is available with a service and maintenance programme from Extractly Ltd. Extractly's engineers serviced and maintained this Dust Extractor on-site at Trelleborg and can help with installation.

Based in Dewsbury, UK with national coverage, Extractly provide LEV installation and LEV testing as well as ducting, design and servicing for dust and fume extraction.

View Dust Control Systems Ltd DCS C/L1/7 x 4 Dust Extraction Unit on our web site at <https://www.rileysurfaceworld.co.uk/machines/30905.htm>

PHOTOGRAPHS TAKEN PRIOR TO REFURBISHMENT.