

Customer Details:

ADM Agriculture Ltd
ADM Agriculture Ltd
Lindsey Lane, Aaron Rd
Hemswell Cliff,
Gainsborough
DN21 5TH
UNITED KINGDOM

SALES QUOTATION

Document Number	Document Date	Page
Q14988	26.10.22	1/6
Sales Person	Customer Ref:	
Liam Kelly	Line 4 Revised	
01924 430430		
Customer Contact:		
Mark Bowley	07796 128403	
Delivery Address		
ADM Agriculture		

Currency: **GBP**

Description	Quantity	Price	Line Total
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Thank you for the opportunity to quote for your new Lev system to serve Line 4.

As discussed on my site visit with Mark Bowley and Piers Marstong we aim to connect to -

- 3 x Seives with 100mm connection each
- 1 x Colour sorter with 4 x 100mm connection
- 1 x Turner sieve with 1 x 300mm and 2 x 200mm connections
- 1 x Infeed hood with 100mm connection (Customer to modify the multiple feeds into one)
- 6 x Bins with various sized connections of 280mm, 315mm, 140mm and 3 x 100mm.

To maintain the recommended duct conveying velocity of 18m/s through the system this would require a total air volume of 23,980m³/h.

For the product to be handled by the system we would use a filter speed of 2.1 m/min for effective filtration and life of the filter media. The total air volume and filter speed calculate into a required filter area of 190m² so for this application we would recommend our ECONOTUBE T208 14/12L for its 208m² filter area and its reverse jet cleaning system ideal for prolonged usage.

At the request of Piers Marston the filter unit will be fitted with a Flame Quench explosion relief system so that the filter unit can be located inside the factory.

The filter unit will be ducted to each point using smooth bore clipped ducting for ease of maintenance and reconfiguration if required in the future. Each point will be a solid connection where possible but where there is excessive vibration from the process a small amount of flexible hose will be used to avoid any vibration traveling down the system and causing damage to the ductwork. There will be Slide dampers at each point for the purpose of balancing the system at commissioning.

There will be an Atex non-return damper installed to the main inlet duct near the filter unit, this is to slam shut in the event of an explosion within the filter unit and avoid any flames traveling back down the ductwork and creating multiple secondary explosions within the machinery.

As requested the unit will be wired on site by our electrician who will mount the control panel local to the filter unit and wire the system up so that the site electrician can then just install the site feed to the control panel.

As agreed we will provide the scaffolding using the site preferred contractor to gain access for the installation of the ducting over the process equipment where a cherry picker or scissor lift cannot reach. Mark Bowley has agreed that our fitters would be able to have the use of the site cherry picker to be used along with the scaffolding.

For the system as described our quote is as follows-

Doc Title:	HG003	E-Mail:	Sales@Heatongreen.co.uk	Company Address:	Delivery dates to be confirmed & agreed at time of order
Issue Date:	01/05/19	Company Reg:	1633368	Heaton Green Dust Control Ltd	
Issue Status:	C	VAT Number:	GB361531866	Atlas Quarry Works	HGDC T&C's apply
Issued by:	K.S.Forman			Howard Street	Goods remain the property of
				Batley	Heaton Green Dust Control Ltd until
				WF17 6AA	paid in full

Description	Quantity	Price	Line Total
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HG01898	Filter Unit Econotube	1	£46,217.84	£46,217.84
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ECONOTUBE T208/14x12 reverse jet cleaning tube filter having the following features;

- 208m² of antistatic polyester needlefelt in the form of 168 tubes supported by mild steel wire cages.
- Sequential controller with low level master board and slave board/s, complete with solenoid valves at high level.
- 3mm mild steel plate panel construction.
- Dust collection hopper terminating in flange for the mounting of the rotary valve
- Access ladder and safety handrails.
- Paint colour TBC

HG01767	Fan Set	1	£11,897.80	£11,897.80
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Reference : A-LRZ9D/710/1000/1
configuration : Direct drive, pedestal mounted
Volume : 24,000m³/h
Static pressure at inlet : 400mmwg
Impeller : Backward inclined carbon steel
Casing : Fully welded carbon steel
Motor : 30kW 2 Pole Zone 22

Complete with drain plug, inspection hatch, and in line splitter attenuator designed to dampen fan discharge noise to 80dBA @ 1m free field

HG01253	Bespoke Controller Comprising of:	1	£3,983.50	£3,983.50
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One off sequence control panel including:

30kW S/D Starter
0.55kW DOL Rotary valve
110v to reverse jet controller
Safety relay
Rupture indicator
24dc control panel
Run and stop buttons with E Stop
Run and trip light

Tested and inspected to Bs7671
Drawings and documentation
Eaton Muller or Shnieder component
Ettal control cabinet

HG01822	Bespoke labour Comprising of:	1	£5,068.50	£5,068.50
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Supply of electrician to wire up the filter unit ready for the site electricians to supply the control panel

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Description	Quantity	Price	Line Total
HG00408 Rotary valve DL 250 zone 20 internal, zone 22 external with Polyurethane Blades	1	£2,892.30	£2,892.30
HG01905 Bespoke item Comprising of:	1	£6,746.38	£6,746.38

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 Atlas Quarry Works
 Howard Street
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Certified Flame Quench explosion relief unit with Rupture indicator which is wired into the control panel for the system to instantly shut down completely in the event of an explosion within the filter unit.
This type of explosion relief allows for the filter unit to be located inside the factory.

IMPORTANT NOTE

Under DSEAR – The Dangerous Substances and Explosive Atmospheres Regulations, it is the duty of the User (or assigned representative) to define locations, extents and classification of hazardous areas (zones) for the installation (project) and the basis of safety for the installation i.e., whether explosion protection (explosion relief) is required, plus information regarding the flammability properties of the dust (Kst and Pmax).

In the absence of information from the User to the contrary this filter assembly has been designed by HGDC adopting a "default design" to cover the worst case that customers could need as follows:

Zone 20 on the dirty side of the filters (i.e. internally)

Zone 22 (Internally) on the clean side of the filters

Zone 22 externally (within the workplace)

To comply with this area classification :

Insertable Filters have Ex Category */3/3D

•Filters themselves do not have their own potential source of ignition i.e. are simple apparatus (*)

•Exhaust fan Ex Category 3/3D and complying with BS EN 14986

•Exhaust fan motor Ex Category 3D

•Controller Ex Category 3D

Standalone Assemblies have Ex Category 2/3/3D

•Dirty side Ex Category 2D

•Exhaust fan Ex Category 3/3D and complying with BS EN 14986

•Exhaust fan motor Ex Category 3D

•Controller Ex Category 3D

•Ex Category 2/3D (or better) discharge equipment (e.g. rotary valve / screw conveyor)

•Ex certified explosion relief panel (venting outside via duct or fitted with Ex certified flameless venting device for indoor venting)

•Ex certified explosion isolation device on the inlet ducting to the filter unit

Note : Standalone Assemblies meet the requirements for zone 20 internally based on the principle of integrated explosion safety from Schedule 1 of EPS, utilising protection by explosion relief.

HGDC, as the supplier, are responsible for providing the following under EPS – The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations

•Declarations of Conformity to show compliance with the Regulations

•Ex certified equipment to a Category compatible with the customer's zoning

•Ex certified explosion protection, as required, to comply with the customer's Basis of Safety, sized using BS EN 14491, based on explosion indices for the dust supplied by the customer

HG01256	Back flap damper ATEX	1	£4,801.90	£4,801.90
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* Atex Non-return damper for the purpose of sealing the unit in the event of an explosion created within the filter unit and stopping any flames travelling back down the ducting and causing a secondary explosion within the production area.

HG01899	Bespoke Ducting Comprising of:	1	£21,871.34	£21,871.34
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Smooth bore galvanised ducting with quick release clipped joints for ease of maintenance and reconfiguration. Designed to maintain a conveying velocity of 20m/s

- * Full set of Ducting
- * Silencer to be fitted to fan discharge
- * fabrication of silencer transition section

HG01626	Bespoke Fabrication Comprising of:	1	£1,575.00	£1,575.00
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Fabrication of hooding for the 3 seiving machines

HG01822	Bespoke labour Comprising of:	1	£1,950.00	£1,950.00
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Supply of static scaffolding to gain safe access for the installation of ducting.

HG01855	Labour Skilled two man fitting team	1	£6,772.00	£6,772.00
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Including -

- * 2 Man fitting team
- * Installation of the Lev system
- * Travel
- * Mileage
- * Accommodation

HG01293	Commissioning	1	£934.00	£934.00
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Including -

- * Site testing/Balancing of the system
- * Mileage
- * Travel
- * Commissioning report

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Description	Quantity	Price	Line Total
HG01769 Carriage	1	£1,385.70	£1,385.70

HG01827 Exclusions	1	£0.00	
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Our quotation does not include for the following:-

- * Offloading and storage prior to erection
- * Site wiring
- * Any mechanical services not specified
- * Joiners, builders or civil work
- * Compressed air supply and pipework

Tax Details

Tax %	Base Amount	Tax	Gross
20.00	116,096.26	23,219.25	139,315.51

Quotation Subtotal: **GBP 116,096.26**

Total Before Tax: **GBP 116,096.26**

Total Tax Amount: **GBP 23,219.25**

Total Amount: GBP 139,315.51

Quotation Valid Until: 26/11/22 0:00

Remarks:

Payment Terms :

30% Deposit due with order (14 days DOI)

60% Due on delivery (30 days EOM)

10% Due on completion of installation (30 Days DOI)

Lead time : 12 week from approval of drawings (based on current workload, subject to change at point of order)

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