



HODGE CLEMCO LTD

Enviraclean

Reverse Pulse Cartridge Collectors

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Owner's Manual

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Machinery Directive

(89/392/EEC amended by 91/368/EEC, 93/44/EEC and 93/68/EEC)

EC Declaration of Conformity

We, HODGE CLEMCO LTD declare that the **Enviraclean Reverse Pulse Dust Collectors** when used in accordance with the owners manual provided, conform with the essential health and safety requirements of the above Directive.

DM Tate

Engineering Manager

[Signature]

Managing Director



Maintenance Inspection Contract

In response to numerous requests we are now able to offer a Maintenance Inspection Contract for your Clemco Equipment.

These requests have been made by customers who appreciate the benefits of regular inspection/ servicing on a planned basis. The remedial work which follows a breakdown or worse, the need for early equipment replacement due to accelerated wear may easily exceed the cost of a Maintenance Inspection Contract.

If you would like further details please contact our Customer Services Department on 0114 254 8811 Ext 2231

A request for more information does not represent any form of commitment on your behalf, so can you afford to say 'NO' at this stage ?

We look forward to hearing from you soon.

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1.0 General Description

The Enviraclean Reverse Pulse Cartridge Collectors are designed to separate the dust particles present in a contaminated air stream, deposit the particles into a receptacle and deliver clean reusable air either into the workplace or direct to the atmosphere

The units can be supplied singular or modular depending upon the dust concentrations and volume of air to be vented

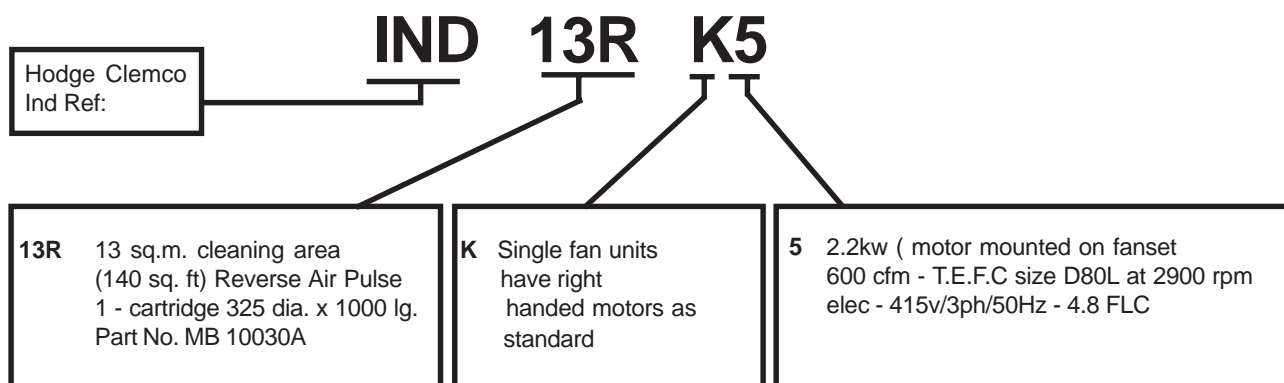
Compressed air and electrical supplies must be connected to the air inlet point, fan motor(s) and reverse pulse timer

Optional Features:-

- a) Manometer
- b) Explosion Relief Panel(s)
- c) Control Panel
- d) Secondary Filter
- e) Bin Balance pipes
- f) Secondary Filters

Dust Collector Identification System (By Part Number)

Typical part number:



2.0 Reverse Jet Timer

2.1 Operation

The electrical timer controls the operation of the solenoid operated diaphragm valve(s) and hence the reverse jet cleaning action. These are pre-set for interval (30 secs) and duration (200 milli secs)

3.0 Installation

Warning: 1. All installation work and all subsequent operation and maintenance of the equipment must be carried out by suitably trained and competent persons. It is recommended that the equipment be installed/commissioned by the manufacturer's engineers

2. Static electricity can be generated during normal operations, therefore the dust collector must be suitably earthed

3. The maximum pressure of the air supply to this equipment must not exceed 110psi, 7 bar .

- 3.1 Position the dust collector on a firm level base, ensuring adequate space is provided for servicing and dust bin removal
- 3.2 Locate and fit the air inlet ducting to the spigot/flange provided and ensure an airtight seal is made
- 3.3 If the filter outlet or explosion relief panel (if fitted) is to have exhaust ducting ensure this is also an airtight connection
- 3.4 Connect suitable air supply to reverse pulse inlet connection.
(0.5 cfm @ 90 psi or 0.84 m³/min @ 6.2 bar)
- 3.5 Prior to initial start up, open the inlet damper,
- 3.6 Ensure correct electrical supply & check fan rotation (415v/3ph/50Hz)

**NB Actual air consumption is dependent on the interval between pulses & the duration of pulse, these may need adjustment to suit process conditions. Range of adjustment :
Interval 4 - 60 seconds, duration 40 - 200 m. s.**

4.0 Operating Instructions

4.1 Start-up

- 4.1.1 Check all doors/bins are securely closed
- 4.1.2 Turn on air supply to unit at source ensuring pressure does not exceed maximum 110 psi
- 4.1.3 Open the inlet tap to the pulse jet system then open drain petcock to blow out any condensation.
- 4.1.4 Close the drain cock and check regulator setting
- 4.1.5 Switch ON the electrical supply at source and start the dust collector motor/s.
- 4.1.6 Adjust inlet dampers to required air volume

4.2 Shutdown procedure

- 4.2.1 Switch OFF electrical supply to motor/s

Allow sufficient time for the next pulse sequence to complete its rundown cycle.

- 4.2.2 Turn OFF air supply to pulse jet
- 4.2.3 Open drain cock to release pressure from pulse jet manifold
- 4.2.4 Turn OFF air supply at source
- 4.2.5 Switch OFF electrical supply at source

5.0 Maintenance

For safety & efficiency it is essential to operate a maintenance programme. The following are a basic guide to assist in planning maintenance schedules:

Warning: Never inspect dust compartment whilst smoking or allow any naked lights in proximity. Dust concentrations can be combustible, explosive and hazardous to health

5.1 Daily

- 5.1.1 Ensure frequent emptying of dust collector bin where fitted and/or hopper base
- 5.1.2 Check pulse jet sequence is operating
- 5.1.3 Relieve pressure from pulse jet manifold to prevent build up of condensation

5.2 Weekly

- 5.2.1 Check all seals & joints for leaks
- 5.2.2 Check operation of regulator/separator

5.3. Every 2000 hrs. operation / 6 months (whichever is earliest)

- 5.3.1 Check compartment on clean air side of cartridge/s for indication of deterioration of cartridge or cartridge seal
- 5.3.2 Check alignment of pulse jets
- 5.3.3 Check pipe clamps are secure
- 5.3.4 Check seals on all doors and outlets are in good condition
- 5.3.5 Check satisfactory operation of solenoid/pulse jet system
- 5.3.6 Check timer operations & sequences.
- 5.3.7 Check manifold drain tap operates freely
- 5.3.8 Check air supply element on pressure regulator
- 5.3.9 Check condition of bins (if fitted)
- 5.3.10 Check integrity of explosion relief panel (if fitted)
- 5.3.11 Check pressure drop with manometer kit. Performance to be compared with records of original installation performance readings

6.0 Recommended Spares

CABLD16RK
18165 - 223
IND 10030A

FILTER/REGULATOR REPAIR KIT
 DOOR SEAL (PER MTR)
 CARTRIDGE AND SEAL

Typical Airborne Noise Emissions Expected

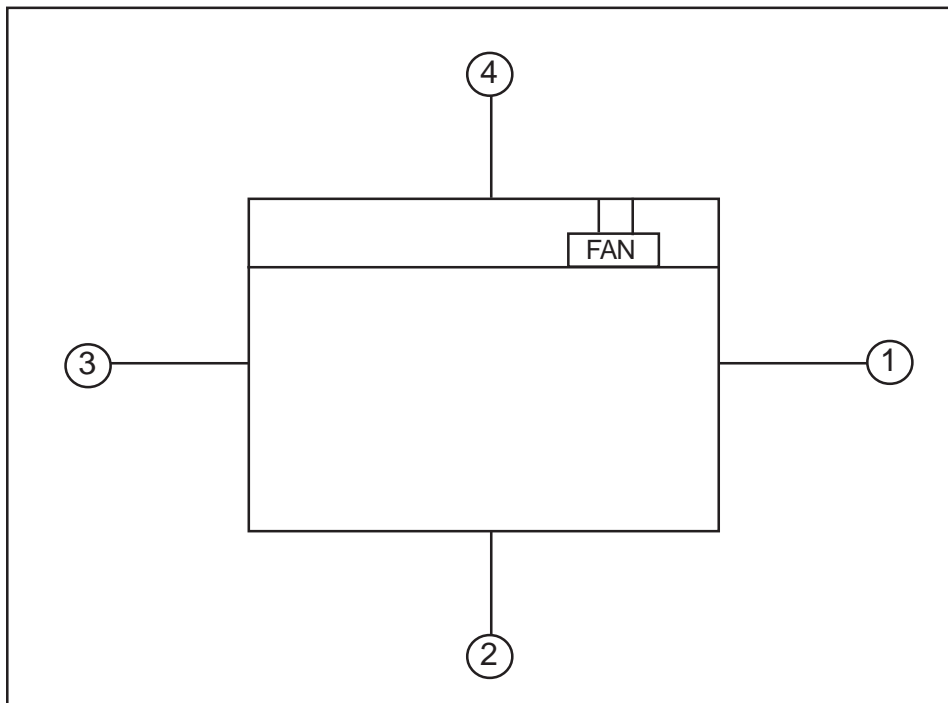
The following are readings taken from equipment operated under the conditions detailed below

The readings recorded should be used to determine the level of ear protection required by the operator(s) and personnel at risk

Equipment Description: ENVIRACLEAN REVERSE PULSE DUST COLLECTOR MODEL IND 13 R k5

Location and Test Conditions: HODGE CLEMCO LTD INTERNAL TEST AREA

Power and Load Conditions: 415 V 3 PHASE 50Hz



Position 1.6m High X 1M DISTANCE	Continuous		Test Duration	High Surge Reading		Back- ground Noise	Notes
	Max dBA	Min dBA		Max dBA	Period		
1.	75		5 MIN			67	
2.	78		5 MIN			67	
3.	91		5 MIN	93		67	Reverse Pulse
4.	87		5 MIN			67	

Note: Noise levels generated by the reverse jet system will vary with the interval between pulses and the duration of the pulse (m.secs)

Wiring Diagram - Dust Collector Panel (1.1kw - 5.5 kw)

THE FUSES SHOULD BE SIZED TO THE TABLE BELOW TO ENSURE CORRECT TYPE 2 CO-ORDINATION.

MOTOR FULL LOAD CURRENT		220V	380V	415V
KW	HP			
1.1	1.0	4.9	2.9	2.6
1.5	2.0	6.3	3.6	3.3
2.2	3.0	9.0	5.2	4.8
4.0	5.5	15.4	9.0	8.4
5.5	7.5	21.0	12.0	11.0

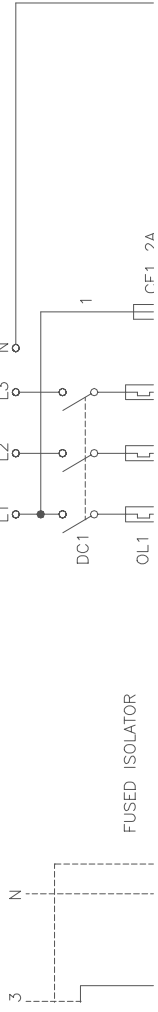
LD BE CARRIED OUT BY ACCORDANCE WITH THE I.E.E. 16th EDITION).

CONTROLLER ON A PACE, PREFERABLY NOT ON THE REVERSE AIR JET TO THE CONTROLLER

LD BE VIA A LOCAL R AND CONNECTED AS SHOWN

D.O.L. FUSE LINK RATINGS	
MOTOR F.L.C	FUSE (A)
2.1-3.0	10
3.1-6.1	16
6.2-9.0	20
9.1-11.0	25
11.1-14.4	32

DIAGRAM 1.2



Maintenance/Service Record

Date	Comments	Signed