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Thank you for choosing to buy JENCO Materials Handling Equipment.

We hope that it will give many years of satisfactory service.

This will be assured if you and your operatives follow the guidance in this manual in the section headed 'MAINTENANCE'.

At the back of this instruction manual you will find a list of spare parts. If you wish to hold any of these for ready availability or if you need to order any spare parts in the future, please do not hesitate to contact our Sales Office for current prices.

We look forward to being of service to you.

JENCO Controls & Export Ltd.

# INSTALLATION – ELECTRICAL AND AIR

## ELECTRICAL

SERIES 'A' LOADER : Check rating plate on unit and connect either 110v or 240v AC supply via 3-core cable provided.

SERIES 'B' LOADER : Check rating plate on unit and connect either 110v or 240v AC supply via 3-core cable provided.

SERIES 'C' LOADER : Connect 380/440v AC supply & NEUTRAL to starter box on remote vacuum pump and make further electrical connections in accordance with the wiring diagrams provided.

SERIES 'D' LOADER : Connect 380/440v AC supply & Neutral via 5-core cable provided.

SERIES 'S' CONVEYOR : Connect 380/440v AC supply & NEUTRAL to remote control panel and make further electrical connections in accordance with the wiring diagrams provided.

SERIES 'W' CONVEYOR : As for 'S' above.

MULTI-SCANNING SYSTEMS : As for 'S' above.

## CABLE SIZES :

Regulations an/or Site Standards will usually determine the size of cables used for 'signal-wiring' but note the following minimum sizes for Multi-Scanning Systems.

240v AC – 0.75mm<sup>2</sup>  
110v AC – 0.5mm<sup>2</sup> ) use larger size if above  
24v DC – 0.5mm<sup>2</sup> ) 50 metres distance.

## COMPRESSED AIR :

A clean, dry compressed air supply regulated to between 70 and 90 PSI is required. It should be connected via flexible pipes, to the units as shown below (avoid the use of fittings below the sizes of those on Jenco equipment.)

- To the venturi and filter purge (where fitted) solenoid valve(s) on Series 'A' loaders
- To the vacuum valve solenoid valves on Series 'S' conveyors.
- To the filter purge solenoid valve (where fitted) on Series 'B' 'C' & 'D' loaders.
- To the filter purge reservoir on Series 'W' conveyors
- To the filter purge reservoir and vacuum valve solenoid valve (where fitted) on external remote filter units.
- To the convey valve (where fitted) on the vacuum pump.

## **SEQUENCE DESCRIPTION :**

When the start button is operated pump will run and the filter will be purged with blasts of compressed air indicated by 'F' on the screen.

After filter purge the vacuum valve opens and the breaker valve closes. This applies vacuum to the conveyor hopper for the period set on the control module, and is indicated by 'C' on the screen.

The applied vacuum closes the outlet flap and material is sucked into the hopper. At the end of the convey period, the vacuum valve closes, the breaker valve opens allowing gravity to discharge material via the outlet flap.

This is followed by discharge (i.e. the period in which the flap is open), indicated by 'P' on the screen, and then filter purge again, indicated by 'F'.

The unit will continue to cycle providing the outlet flap returns to a closed position within a given time. If the flap is held open, a switch is made causing the controls to be inhibited, indicated by 'E00'.

Immediately the flap is free to return to a closed position the unit will automatically restart and the normal cycle will re-commence.

If little or no material has been conveyed, the flap does not open and the red alarm light comes on. The unit will continue to try and deliver material with the light showing.

The cause of the alarm should be investigated, it usually means the material supply has been exhausted or a 'pocket' has formed at the pick-up point.

Once the supply has been re-established, the unit will continue to function normally.

## **OPERATION :**

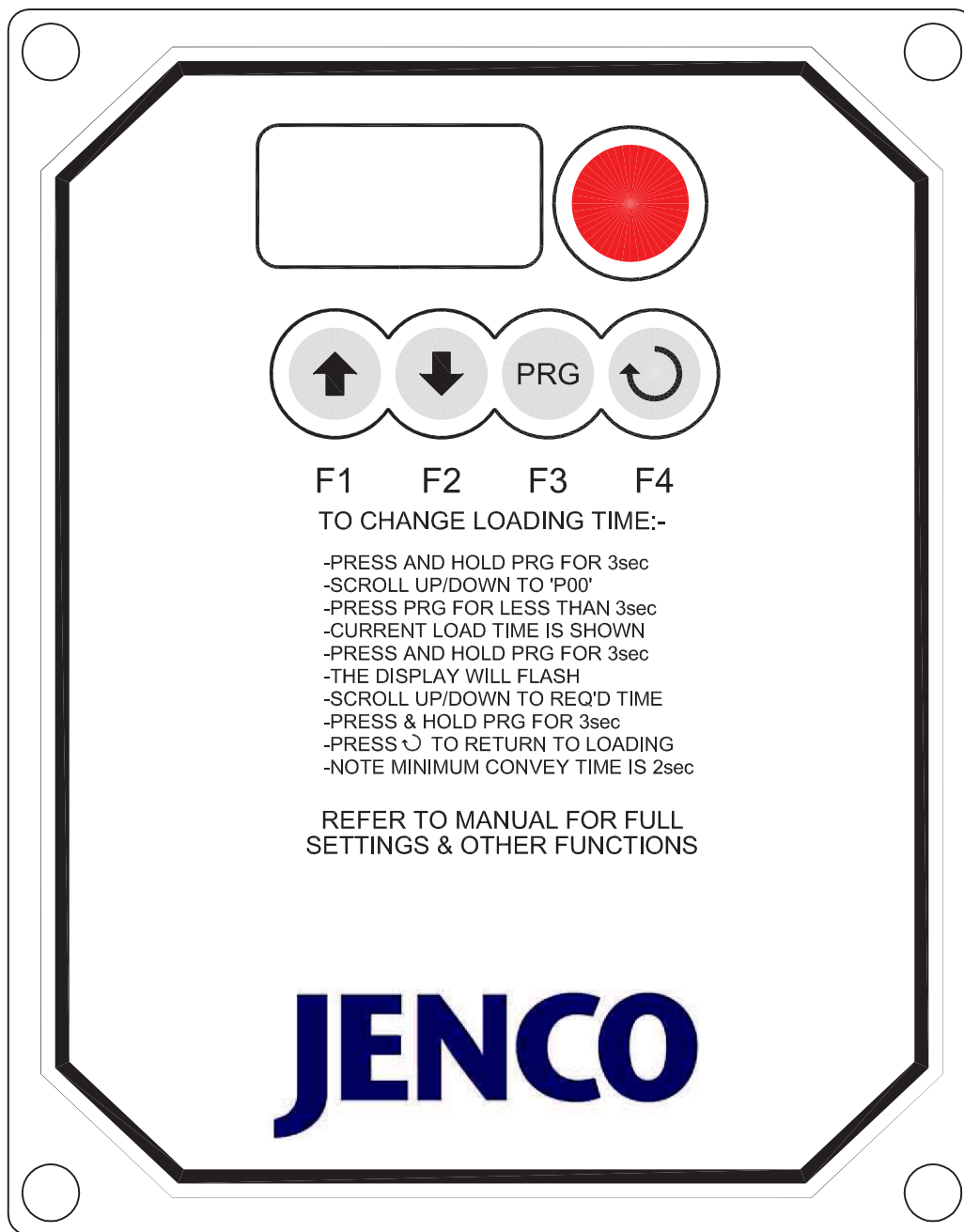
Place the nozzle into the material and open all the air holes, switch the loader on.

Observe the flow of material through the pipe and adjust the number of air holes until a thin, even stream of material is obtained. A thick stream of material will give poor conveying and result in a block pipe.

When satisfied with the conveying characteristics the amount of material being conveyed should be checked. To do this, switch the unit on and whilst it is conveying hold the flap shut. Immediately the valve opens, turn off the power and open the top cover.

The material level should be just below the inlet pipe. If above this the convey time should be decreased, if below increased.

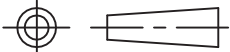
Setting instructions for the convey time are shown on the front panel of the unit.



MATERIAL:-

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E-mail: [info@jenco.co.uk](mailto:info@jenco.co.uk)  
Web site: [www.jenco.co.uk](http://www.jenco.co.uk)

PROJECTION

REMOVE ALL BURRS  
AND SHARP EDGES  
MACHINE AT ✓UNLESS OTHERWISE STATED:-  
ALL DIMENSIONS IN MILLIMETRES.  
TOLERANCES:  
FABRICATION ±2 GENERAL ±0.5 ANGULAR ±1°

SURFACE FINISH 1.6µm

SCALE : 1:1

TITLE

DRAWING No.

DRAWN : G.J.B.

CHKD:

CONTROL PANEL

HL SERIES

DATE: 8-7-15

DATE:

0 10 20 30 40 50 60 70 80

# FAULT FINDING

## GENERAL DESCRIPTION

Normal operation of *Jenco* conveyors is by CONVEY-DISCHARGE-RESET sequencing, controlled by an electronic control card or by a 'scanning system.'

Vacuum, (generated by compressed air or a vacuum pump, depending on type) pulls the conveyor outlet flap fully closed and draws material into the conveyor hopper for a timed period.

The vacuum stops, and the material that has been conveyed opens the outlet flap to discharge. Whilst the flap is open a switch is made which inhibits the controls. When the flap swings free of material the switch is un-made and the conveying sequence re-starts.

If filter purge is fitted, this operates in short 'bursts' during either the discharge or reset periods (depending on control panel type.)

## INITIAL START-UP OF CONVEYOR

Before connecting CONVEY pipe to material source, test installation for correct sequencing. Test and RECORD the hg. reading : A) at the beginning of the convey pipe, B) at the material inlet of the farthest conveyor, and C) at the exhaust inlet.

Also before connecting to the material source ensure that ALL holes on either the aerator nozzle, or the aerator outlet are fully open. If conveying stream appears too 'thin' close down one hole at a time, testing for one or two convey cycles after each adjustment.

If conveying stream is 'solid' or shows a tendency to move in 'plugs' or to 'block' in the pipeline, disconnect the pipe from aerator outlet or remove the nozzle from the material immediately and allow repeating convey cycles to clear the pipe before proceeding. It may be necessary to drill additional holes (3 or 4 at a time) below the collar of the aerator nozzle or in the top of the cap on the aerator outlet. Test in-between as before until the conveying stream shows a regular flow without build-up in the aerator outlet or in the pipe.

## INSUFFICIENT VACUUM POWER / CONVEYING RATE

Check that the factory air supply connection to a Series 'A' loader is not restricted below 10mm bore, and that the pressure during convey is not less than 70 psi.

Check the direction of rotation of the vacuum pump. It should be in accordance with the arrow on the casing.

Check that the dust filter within the conveyor or remote filter unit is not blocked. Clean or replace as necessary.

Check that the outlet flap of the conveyor operates correctly. Replace seal if necessary.

Check that the conveyor cover is seating and sealing correctly and that toggle clips are tight on the cover. Replace rim seal if necessary.

Check for the correct functioning of any Vacuum Valves and Non-return Valves in the system.

Check both convey and vacuum pipelines for leakage and that any branch connectors used in the system are 'closed' by connection to a conveyor or by a closure cap.

### CONVEYING STOPPED

Check that the electric supply is switched on and that any fuses in the conveyor or remote control panel are O.K.

Check that compressed air supply is turned on to conveyor, external filter and vacuum valves according to requirements.

Check that dust filter within conveyors or remote filters are not blocked. Clean or replace if necessary.

Check that conveyor outlet flap opens and closes without obstructions.

Check that with no material discharging the flap hangs freely and its switching positions correspond with those shown on 'flap switch setting' drawing.

Check solenoid valves in the conveyor, filter unit or vacuum valve for blockage or damage caused by dirt in the compressed air supply, and for burnt out solenoid coil.

Check that dirt from compressed air supply has not blocked the venturi 'jet' (Series 'A' only.) This jet is a hexagon cap at the entry to the venturi in the conveyor cover and may be removed by spanner for cleaning and blowing out of the connecting air pipes.

Check integral motor (Series 'B' only.) Failure to replace carbon brushes and dust filter regularly can cause motor damage, as can continuous on/off switching. Replace complete motor/fan unit and dust filter if necessary.

## MAINTENANCE:

**NOTE: ALWAYS ISOLATE AND SECURE ELECTRICAL SUPPLY BEFORE ATTEMPTING ANY FORM OF MAINTENANCE.**

### FILTER CLEANING:

Remote filters and bag filters (within conveyor if fitted) are cleaned by their compressed air purging systems. If the filters become heavily coated, (by over filling the system for example,) it may be necessary to manually clean them. This should be by means of the gentle use of a vacuum cleaner on the OUTSIDE of the filter or by the careful use of compressed air on the INSIDE.

DO NOT use compressed air on the outside as this tends to compact material into the filter fibres.

### FILTER CHANGING:

Filter bags should be changed at the first sign of distress within the filter cloth. To remove a filter bag, slacken the worm clip that retains it in position and pull the bag from its support frame. When replacing the bag ensure all surfaces are clean and the bag is fully seated before tightening the worm clip.

Filter cartridges are removed by either unscrewing or using the tool provided to gently extract them from their housing.

### SEALS:

Seals are fitted to all joints on the conveyors, valves, filters, pumps, and pipework.

Any leaking seal can give rise to serious conveying problems with the consequent loss in performance and throughput. All seals should be examined at monthly intervals and replaced if showing any signs of distress.

### VALVE SEATS:

Breaker valves (on pumps) and Vacuum valves (on conveyors) have rubber discs that form the valve seat. These are very durable but should be examined at three monthly intervals and replaced as necessary.

### PNEUMATICS:

The pneumatic cylinders and solenoid valves employed are a standard application and should become part of the factory planned maintenance programme.

### VACUUM PUMPS:

The Vacuum pumps are designed to give many hours of trouble free service. Full instructions are given in separate maintenance manuals attached.

### CONTROL PANEL:

This unit has no serviceable parts. In the unlikely event of a fault occurring a replacement part should be fitted.

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