Installation and Maintenance Manual Series ZM vacuum ejector

For future reference, please keep this manual in a safe place.

Safety Instructions

These safety instructions are intended to prevent a hazardous situation and/or equipment damage. These instructions are not intended to exhaust all of the possible hazardous situations or all of the various methods to avoid these situations.

1. CAUTION : Operator error could result in injury or equipment damage.

2. WARNING : On extreme conditions, there is a possible result of serious injury or loss of life.

WARNING

1. The compatibility of pneumatic equipment is the responsibility of the person designated by the pneumatic system or decides its specifications.

2. The products specified here are used in various operating conditions, their compatibility for the specific pneumatic system must be based on specifications or after analysis and tests to meet your specific requirements.

2. Only trained personnel should operate pneumatically operated machinery and equipment.

3. Do not service machinery/equipment or attempt to remove component until safety is confirmed.

   1) Inspection and maintenance of machinery/equipment should only be performed after completion of safe isolation control positions.

   2) When equipment is to be removed, confirm the safety process as mentioned above. Switch off all air and electrical supplies and exhaust all residual compressed air in the system.

   3) Before machinery/equipment is re-started, ensure all safety measures to prevent sudden movement of component(s) are (Bled all air into the system gradually to create back-pressure, i.e. incorporate a slow-start valve).

4. Contact SMC if the product is to be used in any of the following conditions:

   a) Conditions and environments beyond the given specifications, or if product is used outdoors.

   b) Installations in conjunction with atomic energy, railway, air transportation, vehicles, medical equipment, food and beverages, recreation equipment, emergency stop circuits, press applications, or safety equipment.

   c) Any application which has the possibility of having negative effects on people, property, or animals, requiring special safety analysis.

   d) Difficult differential allowance from the ‘set point’. For general vacuum applications, a 1% differential is sufficient (Fig 6A).

5. Ensure that the piping from generator to vacuum pad is kept as short as possible to prevent restriction and leakage.

6. When installing vacuum generators the rule is one generator per machine. (Programmable controller input or output relay)

   a) Connect to control unit, -OR- air control switch input or output relay.

   b) Connect to power source.

Note: After removal/installation of the following:

Vacuum switch
Air supply valve
Vacuum release valve

Re-connect air and electrical supplies and carry out full functional tests on the vacuum ejector.

CAUTION

Operation of solenoid manual override

Ensure all safety pneumatics are in place before operating any manual override as connected equipment will commence operation.

Push pull-mock manual override (orange button)

Push down the orange button and hold during duration of ‘set’ position. Release orange button and manual override will reset to ‘off’ position.

Ensure manual override and manual override will reset to ‘off’ position.

1) Inspection and maintenance of machinery/equipment should be performed by trained and experienced operators.

2) An application which has the possibility of having negative effects on people, property, or animals, requiring special safety analysis.

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Note: When installing vacuum ejectors the rule is one generator per machine. (Programmable controller input or output relay)

Vacuum circuit

Ensure that the piping from generator to vacuum pad is kept as short as possible to prevent restriction and leakage.

When designing the air supply circuit ensure that pipe sizes have sufficient capacity to prevent air pressure drops within the generator. This also applies to valves and fittings.

The supply air should be clean and oil free.

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