

# Airlock Safety Precautions

## Introduction

Airlocks (also called rotary or star valves) allow free flowing solids to pass from one space to another space with a different pressure. Airlocks are of no use by themselves. They are only useful as one component in a material handling system.

In order to function, airlocks must have tight clearances and powerful motors. Any part of the human body in the way when a blade closes with the housing will be cut off.

Fortunately, in the vast majority of applications, airlocks operate in fully enclosed systems so people cannot accidentally contact the rotating blades. However, accidents can still happen if people are careless using these valves.

## Safety Rules

### Training

Teach everyone who works around an airlock that:

- Anything coming into contact with the blades will be cut off.
- Airlocks can start without warning.
- Before working anywhere near an airlock they must follow the approved lockout/tagout procedure.
- The airlock must not be operated without the guards in place.

### Installation

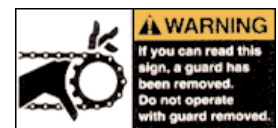
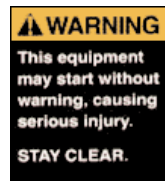
- Whenever possible, avoid placing any opening within arm's reach of the airlock.
- If any access must be closer, interlock it so the valve will shut off whenever the cover is opened.
- If either inlet or outlet are open, they must be guarded.
- Have a lockout panel and a lockout procedure that is enforced.

### Maintenance/Service/Cleaning

- Read your Operation and Maintenance Manual.
- Follow lockout/tagout procedures before working on any equipment.

## Safety Decals

Locate all of the safety decals on your equipment and know their meaning before operating your rotary valves.



**Replacement decals are available from MAC at phone 888-821-2476 fax 816-891-8336.  
Ask for decal kit #413467.**

Note: MAC is more concerned with preventing accidents than with avoiding lawsuits. Please feel free to put MAC safety decals on our competitor's airlocks. (But be fair, if someone does get injured on one anyway, please tell them and their lawyer that MAC only supplied this flyer and the labels -for free- but MAC did not supply the airlock.)



## Lockout/Tagout



Before inspecting or servicing any equipment, perform an approved Lockout/Tagout procedure on electrical service, compressed air supply or any other energy source.

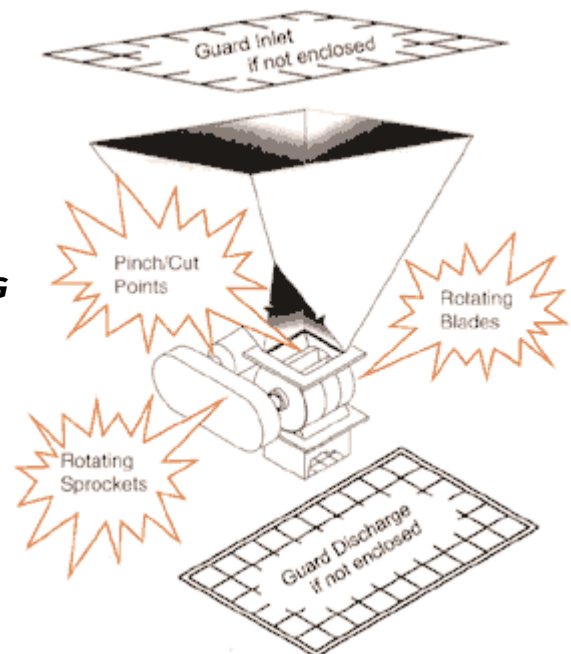
Like anything else in a factory, control of an airlock must be in accordance with OSHA Standard 29 CFR 1910.147 "The Control of Hazardous Energy (Lockout/Tagout)". This standard "requires employers to establish a program and utilize procedures for affixing appropriate lockout devices or tagout devices to energy isolation devices and to otherwise disable machines or equipment to prevent unexpected energizing, start-up or release of stored energy in order to prevent injury to employees".

An appropriate Lockout/Tagout procedure must be designed specifically for each application. In general, however, a Lockout/Tagout procedure is intended to ensure that each worker attaches his own lockout device which puts the system into a safe state and de-energizes the airlock and anything else that might hurt him. Because he has his own lock de-energizing the system, each worker can prevent accidental start-up until he has removed his own lockout device.

For further information on your Lockout/Tagout requirements, refer to the OSHA standard.

## Develop Safe Work Habits

- **KNOW YOUR EQUIPMENT**
- **KEEP DRIVE GUARD IN PLACE WHILE OPERATING**
- **USE LOCKOUT/TAGOUT PROCEDURE**



## **AIRLOCKS - DANGEROUS IF NOT USED PROPERLY**

If you have use for these safety rules or any part of them that might encourage the safer use of rotary valves, permission to use it will be freely given. Call Directory of Safety, at 800-223-2191.