



# Abrasive Blasting Control System

For:

DUST COLLECTOR with 45KW FAN

AIR CONVEYOR 15KW

ROTARY LOCKS 0.37KW

SWEEPER 1.5KW

BLAST GUNS & LIGHTS

ROOM LIGHTS 4KW

VIBRATOR

ROLLER DOORS 1.5KW



## Key Features

Set starting and stopping sequences P.3

Sweeper with adjustable Pause and Travel times P.21

Sweeper limit Switches fault light P.4

NO RESPONSE alarm for all guns P.4

Doors & blasting interlock

Rotary Locks and Clean UP interlock at shut down

Open doors indicator light

Fuse protected Blast gun switch

Electric motor trip indicator light

## The System

### Overview

The controller is designed to operate any of the blast guns provided some strict conditions are met. The start up and the shut down functions follow predetermined fixed sequences.

The system is made of the following components:

- A dust collector with a 45KW fan and two Rotary Locks 0.37KW
- A sequential timer ST10AC with On Demand Cleaning pMCb
- An Air Conveyor (15KW)
- A Sweeper 1.5KW
- Blast Guns (4) and light
- Room Lights 12x400W

One Roller Door 1.5KW motors

The controller – Electrical Control Board (ECB) is fitted with an emergency switch that will STOP the operation of the dust collector, Air conveyor, Rotary lock, Sweeper and blasting guns.

The enclosure is also fitted with a main isolator switch.

The main light (4.8KW) switch for the abrasive blasting room is located on the front panel.

Provision has been made to connect a vibrator (24VAC) and a CO monitor (110VAC) to the controller. A separate enclosure houses the air valves - Small Valve Board (SVB) and corresponding blast lights.

### Operation

To be able to operate the blast guns the following conditions must be met:

- All doors must be closed
- Dust collector and Rotary locks operating
- Air conveyor operating
- Sweeper operating

When these conditions are met the following lights will be ON

The five (5) green lights on the ECB

The four blue lights on the SVB

Note: If any door is open the blasting will be disabled and the door yellow light is ON. However the sweeper is still operating.

### **Start Up Sequence**

When the Dust Collector START pushbutton is depressed the:

- i. Dust collector Fan, Rotary lock & the sequential timer (ST10AC) will “turn on”.
- ii. Then when the Air Conveyor pushbutton is depressed the Air Conveyor and the vibrator will “turn on”.
- iii. Then when the Sweeper pushbutton is depressed the Sweeper will operate.

The blasting guns can be used provided the doors are closed.

### **Shut Down Sequence**

When the Sweeper STOP is depressed first this will disable the Blasting guns and Stop the sweeper.

When the Air conveyor STOP pushbutton is depressed all will “switch off” except for the dust collector.

When the Dust Collector STOP pushbutton is depressed the system will “switch off” immediately, however the Rotary locks and ST10 will continue to operate until the CLEAN UP cycle is active

NOTE: Blasting can only occur when all doors are closed.