
OPERATION & MAINTENANCE

HORIZONTAL SLIDING DOOR for LINEAR ACCELERATOR

GENERAL

The Pitts Little Shielded Horizontal Sliding Door System is specifically designed for operation in facilities using a Linear Accelerator for Radiation Therapy. The door is simple to operate and requires very little maintenance. This document contains operation and trouble shooting hints and recommended maintenance schedules and procedures.

CAUTION: This door may only be operated by authorized personnel. The Door is extremely heavy and improper operation could result in severe personal injury or death.

OPERATION

The motion of the door is controlled by push buttons. The Operator Control Panel consists of three color coded buttons, red "STOP", green "OPEN" & black "CLOSE". The Inside Vault Control Panel consists of two color coded buttons, red "STOP" & green "OPEN". These push buttons command the Control Panel to perform the indicated functions. The Door System has several active safety features. Scheduled testing of the safety system is required in order to assure that these features are operational.

EMERGENCY OPERATION

An included UPS (Uninterruptible Power Supply) provides surge protection and auxiliary power to the Control System and in the event of facility power outage will allow door operation. This system must be tested on a monthly basis.

A mechanical ratchet cable puller is provided for opening the door in the unlikely event that all other systems fail.

SAFETY SYSTEMS

A door mounted sensing system will stop and reverse motion of the door when the door is obstructed.

Stop buttons outside and inside the vault when pressed will stop the closing motion.

TROUBLE SHOOTING

- DOOR WILL NOT OPERATE – The door is in the Opened position and will not Close.
 - CHECK the following:
 - Is the UPS plugged in to the wall mounted receptacle?
 - Is the UPS “ON” (the green light on the front panel should be on)
 - Incoming power. (120 VAC)
 - Panel mounted disconnect. Is it in the “ON” position
 - Fuses.
 - Press the “Open” Push button then press the “Close” Push button.
 - If door still will not operate: With the panel door open and the panel mounted disconnect turned “ON” check the lights inside the panel.
 - The 24 VDC power supply “DC On” light should be lit.
 - The DL06 PLC “Power” and “Run” lights should be lit and the “CPU” light should NOT be lit.
 - The Input lights X0, X4, X5 and X10 should be lit.
 - Pressing the green “Open” push button which is mounted outside the vault should light Input X12
 - Pressing the green “Open” push button which is mounted inside the vault should light Input X13
 - Pressing either red “Stop” push button should turn off input light X10
 - Pressing the black “Close” push button should light input light X14
 - DOOR WILL NOT OPERATE – The door is in the Closed position and will not Open.
 - If the door is closed and will not open unplug the UPS from the power source (wall receptacle). The door should open using the battery power in the UPS. If the door still does not open attach the cable puller and open the door.
 - CHECK the following:
 - Is the UPS plugged in to the wall mounted receptacle?
 - Is the UPS “ON” (the green light on the front panel should be on)
 - Incoming power. (120 VAC)
 - Panel mounted disconnect. Is it in the “ON” position
 - Fuses, check for open circuit.
 - Press the “Open” Push button.
 - If door still will not operate: With the panel door open and the panel mounted disconnect turned “ON” check the lights inside the panel.
 - The 24 VDC power supply “DC On” light should be lit.
 - The DL06 PLC “Power” and “Run” lights should be lit and the “CPU” light should NOT be lit.
 - The Input lights X0, X6, X7 and X10 should be lit.
 - Pressing the green “Open” push button which is mounted outside the vault should light Input X12
 - Pressing the green “Open” push button which is mounted inside the vault should light Input X13
 - Pressing either red “Stop” push button should turn off input light X10
 - Pressing the black “Close” push button should light input light X14
-

MAINTENANCE SCHEDULE

Daily

The door Bumper should be checked to verify proper operation.

Once per month

The 2" Diameter rail above the door should be inspected and if necessary greased using a heavy lithium grease such as Grainger 4ZF49 (Mobilith SHC 100).

The cog timing belt should be inspected and if necessary lubricated with a heavy lithium grease such as Grainger 4ZF49 (Mobilith SHC 100).

The bearings at the ends of the belt drive should be inspected and if necessary lubricated with a heavy multipurpose grease such as Grainger 4ZF46 (Mobilith AW2).

The Emergency power outage operation should be checked for proper operation.

Once per year

All fasteners should be checked for tightness. All lubrication points should be inspected.