

## ENERGY CONTROL PROCEDURE

The following Energy Control Procedure should be used for the equipment listed below.

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### EQUIPMENT DESCRIPTION

GENERAL DESCRIPTION: Horizontal Machining Center (#2033,2034,2036)  
 MANUFACTURER: Makino  
 MODEL: A51 SERIAL NUMBER: 324/330/399  
 LOCATION: NC Dept

### CONTROLS

The following Controls, including “start/stop” buttons, toggle switches, emergency stop button, shut-off valves, etc. have been identified for this equipment.

Description of Control	Location on Equipment
Main Disconnect / breaker	Back right side
Power on button	Control pendent Operator side
Air inlet	Rear of machine top conveyor side
Main breaker/disconnect on wall marked with BMC #	On wall behind machine

### ENERGY SOURCES/ISOLATION DEVICES

The following Energy Sources and Energy Isolation Devices supporting this equipment have been identified.  
 Energy Types: (CHECK ALL THOSE APPLICABLE)

Electrical	<b>X</b>
Pneumatic	<b>X</b>
Hydraulic	
Steam	
Chemical	
Thermal	
“Stored” Energy	
Other	

Sources / Devices	Location	Type of Lock/Tag Needed
Main breaker	Rear of machine	Std. lock & tag
Air inlet	Top rear	Quick disconnect cover and lock and tag
Main Disconnect	Wall Behind Machine	Std Lock & Tag

## SHUTDOWN PROCEDURES

The steps listed below must be followed to properly shut down and de-energize this equipment. To verify the effectiveness of each step follow the instructions in the "Verification" column.

### Lock-Out/Tag-Out

Procedure	Device used	How to verify
NOTIFY "AFFECTED" AND "OTHER" EMPLOYEES OF IMPENDING EQUIPMENT SHUTDOWN		
Push power off button	NA	Try any of the manual functions / the CRT will go blank
Main machine breaker	Std. lock & tag	Try power on button
Air disconnected	Conveyor side rear top	Check gauges open drain
Main disconnect	Std. lock and tag	Check for voltage at machine breaker

**RELEASE AND RESTART PROCEDURES**

The steps listed below must be followed to properly release this equipment from a locked or tagged out condition and restart it.

<u>Procedure</u>	<u>Location</u>
Inspect work area and remove tools and other non-essential items.	
Inspect equipment and components to make sure it is intact and ready to run.	
Notify "affected" and "other" employees in the area of impending restart and make sure they are safely positioned away from the equipment	
unlock and switch on main & used disconnect	On wall behind machine
Unlock and reconnect air disconnect after closing drain	Top rear of machine
unlock and switch on machine breaker	Rear of machine
Push power on button	On operators pendent side of machine
Zero return all axis	Operator panel