Accurate Machine Tool Svc, Inc.

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Mills using Randtronics Servo Amplifiers.

Each type machine will be adjusted differently than others. Make the following pot adjustments on your amp then find the section that pertains to your machine to complete the setup.

Tool Requirements:
a. Voltmeter
b. Small Screwdriver

Check Up-close - Mounted Vertically

Presets - All Machines

AUX 20 turns CCW
CLM 20 turns CW
BAL 20 turns CW then 10 turns CCW

Presets per Machine Type:

All Machines with "B" Control (.001 resolution)

SIG 20 turns CW then 5 turns CCW
TAC 20 turns CW
GAN 20 turns CW then 5 turns CCW

Start Here for tuning procedure on Randtronics amps with "B" Control (.001 resolution).

Adjust (GAN) until the motor starts to oscillate, turn (GAN) CCW until oscillation stops, then turn an additional 5 turns CCW.

Program machine to move back and forth at 25 IPM on axis to be adjusted. On Servo Control Board, connectors J2 (X), J3 (Y), and J4 (Z), connect meter to Pins 8 and 9 for axis to be adjusted. Adjust (SIG) pot to achieve .9 volts dc in both directions. Use (BAL) pot to adjust difference from one direction to another. You can fine tune the balance by monitoring the control display, and adjusting the pot until the numbers on the screen stop toggling.

All Machines with "BX" Control (.0001 resolution) and Black & Silver Motors

SIG 20 turns CW then 5 turns CCW
TAC 20 turns CW
GAN 20 turns CW then 5 turns CCW

Start Here for tuning procedure on all other Randtronics amps with "BX" Control (.0001 resolution) and Black & Silver Motors.

Adjust (GAN) until the motor starts to oscillate, turn (GAN) CCW until oscillation stops, then turn an additional 5 turns CCW.

Program machine to move back and forth at 25 IPM on axis to be adjusted. On Servo Control Board, connectors J2 (X), J3 (Y), and J4 (Z), connect meter to Pins 8 and 9 for axis to be adjusted. Adjust (SIG) pot to achieve .65 volts dc in both directions. Use (BAL) pot to adjust difference from one direction to another. You can fine tune the balance by monitoring the control display, and adjusting the pot until the numbers on the screen stop toggling.

All Machines with "BX" Control (.0001 resolution) and Black Motors

SIG 20 turns CW
TAC 20 turns CW
GAN 20 turns CW then 6 turns CCW

Start Here for tuning procedure on all other Randtronics amps with "BX" Control (.0001 resolution) and Black Motors.

Adjust (GAN) until the motor starts to oscillate, turn (GAN) CCW until oscillation stops, then turn an additional 5 turns CCW.

Program machine to move back and forth at 25 IPM on axis to be adjusted. On Servo Control Board, connectors J2 (X), J3 (Y), and J4 (Z), connect meter to Pins 8 and 9 for axis to be adjusted. Adjust (SIG) pot to achieve .65 volts dc in both directions. Use (BAL) pot to adjust difference from one direction to another. You can fine tune the balance by monitoring the control display, and adjusting the pot until the numbers on the screen stop toggling.

KM3 & MD1 Machines with "MAX" Controls

SIG 20 turns CW
TAC 20 turns CW then 8 turns CCW
GAN 20 turns CW then 9 turns CCW

Start Here for tuning procedure on all other Randtronics amps with "MAX" Controls.

Adjust (GAN) until the motor starts to oscillate, turn (GAN) CCW until oscillation stops, then turn an additional 3-5 turns CCW.

Program machine to move back and forth at 40 IPM on axis to be adjusted. On Chasis Terminal Strip, connect meter to Pins 2 and 3 for each axis to be adjusted. Adjust (SIG) pot to achieve .8 volts dc in both directions. Use (BAL) pot to adjust difference from one direction to another. You can fine tune the balance by monitoring the control display, and adjusting the pot until the numbers on the screen stop toggling.

MD3 Machines with "MAX" Control (X & Y AXIS)

SIG 20 turns CW then 8 turns CCW
TAC 20 turns CW then 4 turns CCW
GAN 20 turns CW then 5 turns CCW

Start Here for tuning procedure on all other Randtronics amps with "MAX" Controls (X & Y AXIS).

Adjust (GAN) until the motor starts to oscillate, turn (GAN) CCW until oscillation stops, then turn an additional 3-5 turns CCW.

Program machine to move back and forth at 40 IPM on axis to be adjusted. On Chasis Terminal Strip, connect meter to Pins 2 and 3 for each axis to be adjusted. Adjust (SIG) pot to achieve .8 volts dc in both directions. Use (BAL) pot to adjust difference from one direction to another. You can fine tune the balance by monitoring the control display, and adjusting the pot until the numbers on the screen stop toggling.

MD3 Machines with "MAX" Control (Z AXIS)

SIG 20 turns CW
TAC 20 turns CW
GAN 20 turns CW then 5 turns CCW

Start Here for tuning procedure on all other Randtronics amps with "MAX" Controls (Z AXIS).

Adjust (GAN) until the motor starts to oscillate, turn (GAN) CCW until oscillation stops, then turn an additional 3-5 turns CCW.

Program machine to move back and forth at 40 IPM on axis to be adjusted. On Chasis Terminal Strip, connect meter to Pins 2 and 3 for each axis to be adjusted. Adjust (SIG) pot to achieve .8 volts dc in both directions. Use (BAL) pot to adjust difference from one direction to another. You can fine tune the balance by monitoring the control display, and adjusting the pot until the numbers on the screen stop toggling.