


SR Axis Torque Adjustment

For the ZX machines that have a servo motor rather than a piston to rotate the Saw the Torque needs to be reduced significantly

 Difficulty **Medium**

 Duration **20 minute(s)**

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Step 1 - Gather Information - Gear Box

Check Axis.mul and look at the line

SR,7,1,1,291833.500,1,200,500,500,125.1,90.0,InF_SRHome,3,20,5,0.0,5.0,10.0,0.000,

Gear ratio

291833.500 100:1

145602.000 50:1

Step 2 - Gather Information - Drive used

AX8206 Drive


or

AX5003 Drive

Step 3 - Gather Information - Motor Being used

It should be a AM8032-E

The AM8032-E has torque constant of 0.8 N/A

 ...If not seek advice

Step 4 - Aim

We are aiming to deliver a torque of no more than 56 Nm

For

100:1 the motors maximum delivered torque 0.56 Nm

or

50:1 the motors maximum delivered torque 1.12 Nm

Step 5 - Regenerate Projects

1. Put old projects into a clearly named folder
 2. Create a new empty folder with the name of the machine.
 3. Open Project "From Target" to the new folder
 4. Check the mappings are present
 5. Add a Drive Manager project
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Step 6 - For a AX5003 Drive

Use drive manager to get to the parameters.

Check the value of P-0-092 this value should be 5.9A (if not seek help)

Change the value of S-0-0092 to

12% for 100:1

or

24% for 50:1

If you have an old drive manager you may have to enter:

The value may be in .1 scale hence factor of 10 and also could be in HEX

120 or 0C00,

240 or F000

Step 7 - For AX8206 Drive

Check channel B 0x3643:1 s/b 2.95A

Change 0x6872 to

24% for 100:1

or

48% for 50:1

Step 8 - For Both Drives

1. Add to startup parameters
 2. Download to drive
 3. Save project
 4. Activate
 5. Update control board
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Step 9 - Crib Table example

	Machine	Z079
Save Old project		y
Pull new Project		y
Check Mappings		y
<u>GearBox</u>	100:1	y
	50:1	
Drive	AX8000	y
	AX5000	
P-0-0092	5.9A	
0x3643:1	2.95A	y
set S-0-0092		
	100:1	12
	50:1	24
Bipolar Torque		
set 0x6872		
	100:1	24
	50:1	48
Download to Drive		y
Set Startup		y
Activated		y
Released		y
Update Control Log		Y