

# MAGNETEK

---

## E L E V A T O R

HPV1000-App\_Note\_12

# Position Lock Guide

Guide to set up Position Lock in the HPV1000 drive



# POSITION LOCK SETUP GUIDE

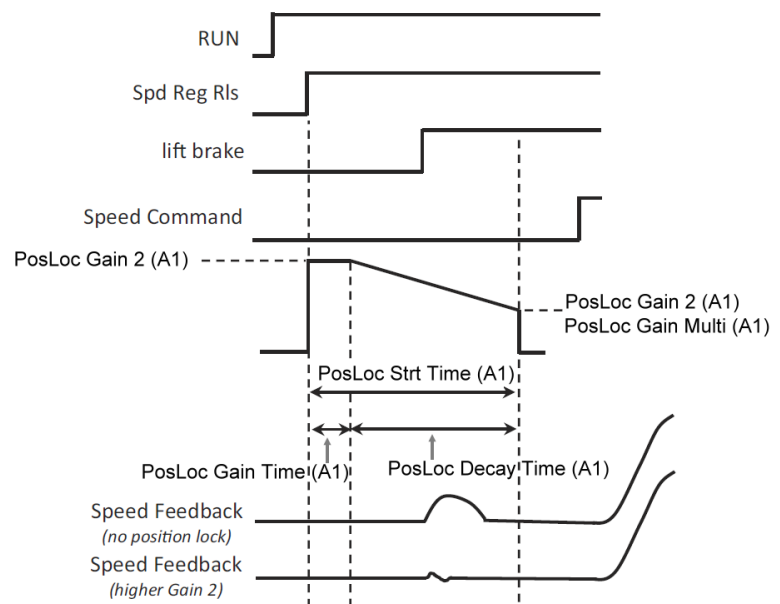
The position lock is a function that will eliminate rollback in a lift that does NOT have a load weighing device for pre-torque installed and connected to the drive. This function is only applicable to PM motors.

**Note:** If pre-torque is used, position lock will be disabled.

1. Position the lift roughly in the middle of the lift shaft to allow free movement in either direction
2. Put the lift on to inspection control
3. Set inspection speed to 0m/s so that when the test buttons are pressed the lift will run at zero speed (this will clearly display any movement on the sheave when the brake lifts)
4. Make sure the following parameters are set to match the recommended start settings as documented in the Table 1
5. Press and hold the test control buttons (either direction) and note of how much rollback is observed.
7. Increment PosLoc Strt Time (A1) by increments of 0.05 sec until you see an effect on the rollback (either there is less rollback, the motor rolls back then rolls forward, or it rocks back and forth):  
**Note:** If the motor starts to vibrate or oscillate, dampen the speed regulator gains PosLoc P-Gain (A1) in steps of 5 and PosLoc I-Time (A1) by increments of 0.5
8. Next, increase PosLoc Gain 2 by increments of 1 until the rollback is eliminated.
9. Set PosLoc Gain Time (A1) to 0.01.
10. Set PosLoc Decay Time (A1) to the maximum value (This maximum value is dependent on the values of PosLoc Strt Time (A1) and PosLoc Gain Time (A1), therefore will vary dependant on the installation)
11. The inspection speed can now be reset to its original value and the lift testing can be completed.

Sub-menu	Parameter Name	Default	Recommended Starting Value
<b>C1(P6-02)</b>	<b>Brake Pick CNFM</b>	<b>None</b>	<b>Internal Time</b>
C1(P1-02)	Trq Comp Cmd Src	Disable	Disable
C5(H3-02)	Analog A1 Select	None	Neither parameter should be set to 'Pre-Torque', If it is, position lock will be disabled.
C5(H3-10)	Analog A2 Select	None	
<b>A1(P6-06)</b>	<b>Brake Pick Time</b>	<b>0.5 sec</b>	<b>0.5 – 1 sec</b>
<b>A1(S1-04)</b>	<b>PosLoc Strt time</b>	<b>0.4 sec</b>	<b>1.4 sec</b>
<b>A1(C5-19)</b>	<b>PosLoc P-Gain</b>	<b>40.00</b>	<b>5</b>
A1(C5-20)	PosLoc I-Time	0.100	Default
A1(S3-01)	PosLoc Gain 1	5	Default
<b>A1(S3-02)</b>	<b>PosLoc Gain 2</b>	<b>0.00</b>	<b>2</b>
A1(S3 -04)	PosLoc Max Time	0.40 sec	Default
A1(S3-42)	PosLoc Gain Time	0.00 sec	Default
A1(S3-46)	PosLoc Decay Time	0.10 sec	Default
A1(S3-41)	PosLoc Gain Mult	0.50	Default

**Table 1 – Recommended Start Settings**



**Diagram 1 – Position Lock Sequencing**