NOVEMBER, 2002

VF/HS/HL-Series

**THIS VERSION IS FOR THE USE WITH BLACK AND WHITE PRINTERS**

# MAGNETEK & MITSUBISHI SP DRIVE PROGRAMMING

*Haas Automation*
Training


Procedure

# Magnetek (503)

## Spindle Drive Programming

The Digital Operator keypad enables the GPD 503 to be operated in either the Drive mode or the Program mode. The program mode enables the operator to enter information into the GPD 503's memory to configure the GPD 503 to the application. This is the mode we'll be using in this procedure.

**Change Display With DSPL Key:**

Apply power *The Drive Lamp is on.*

- Press <**PRGM/DRIVE**> *The drive lamp turns off. Display changes to first Frequency Reference Memory Setting constant number. An-01* (See Procedure For Changing Parameters to change parameters)
- Press <**DSPL**> *Display changes to first Run Operative Setting constant number. Bn-01* (See Procedure For Changing Parameters to change parameters)
- Press <**DSPL**> *Display changes to first System constant number. Sn-01* (See Procedure For Changing Parameters to change parameters)
- Press <**DSPL**> *Display changes to first Control constant number. Cn-01* (See Procedure For Changing Parameters to change parameters)
- After all programming is complete, Press <**PRGM/DRIVE**> *Returns GPD 503 to the Drive Mode.*

**Procedure for Changing Parameters:**

- Press <∧> or <∨> as necessary to scroll. *Display scrolls up or down by 1 each time these keys are pressed.*
- Press <**DATA/ENTER**> *Display shows the current value.*
- Press <>> *Blinking part of the display shifts left.*
- Press <∧> and/or <∨> *Value blinking increases or decreases when these keys are pressed.*
- Press <**DATA/ENTER**> *Display lights steady for a short time, then "End" is displayed for approx. 1 sec. Then parameter is displayed again, with one digit blinking.*
- **NOTE:** If the parameter being entered is not within an acceptable range for the selected constant, the fault indicator "Err" will appear instead of "End". The new parameter was not written into EPROM memory. The display will again show the value currently stored in memory.
- Press <**DSPL**> *Display returns to the beginning of cycle.* (See Change Display With DSPL Key).

## Magnetek Spindle Drive Parameter List (503):

| Copy Unit: | | | A:SEL-1 | A:SEL-2 | A:SEL-3 | B:SEL-1 | A:SEL-3 | | B:SEL-2 | | B:SEL-3 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Haas Model | VF-1 | VF-<br>0, 1, 2 | VF-0 | VF-<br>1, 2, 3* | VF-3, 4 | VF-<br>1, 2, 3, 4 | VF-0 | VF-0 | HS-1 | HS-1 | HL-1 | HL-1h |
| Max RPM: | 5000 | 7500 | 7500 | 7500 | 7500 | 10k | 10k | 12k | 7500 | 10k | 3500 | 5000 |
| Motor Hp: | 5/7.5 | 5/7.5 | 7.5/10 | 7.5/10 | 10/15 | 7.5/10 | 7.5/10 | 7.5/10 | 10/15 | 10/15 | 10/15 | 10/15 |
| Drive Model | DS307 | DS307 | DS308 | DS308 | DS309 | DS309 | DS308 | DS308 | DS309 | DS309 | DS309 | DS309 |
| | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Parameter | | | | | | | | | | | | |
| An-01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| An-02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| An-03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| An-04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| An-05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| An-06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| An-07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| An-08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| An-09 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| | | | | | | | | | | | | |
| Bn-01 | 1.00 | 1.80 | 2.00 | 2.00 | 2.00 | 3.00 | 2.00 | 2.00 | 2.00 | 3.00 | 5.00 | 7.00 |
| Bn-02 | 1.00 | 1.80 | 2.00 | 2.00 | 2.00 | 3.00 | 2.00 | 2.00 | 2.00 | 3.00 | 6.00 | 9.00 |
| Bn-03 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| Bn-04 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| Bn-05 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Bn-06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Bn-07 | 1.00 | 1.50 | 1.00 | 1.00 | 1.50 | 1.50 | 1.00 | 1.00 | 1.50 | 1.50 | 1.50 | 1.50 |
| Bn-08 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Bn-09 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |
| Bn-10 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Bn-11 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| Bn-12 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| | | | | | | | | | | | | |
| Sn-01 | 4 | 4 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 6 |
| Sn-02 | F | F | F | F | F | F | F | F | F | F | F | F |
| Sn-03 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |
| Sn-04 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |
| Sn-05 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Sn-06 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |
| Sn-07 | 0111 | 0111 | 0111 | 0111 | 0111 | 0111 | 0111 | 0111 | 0111 | 0111 | 0111 | 0111 |
| Sn-08 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |
| Sn-09 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |
| Sn-10 | 1110 | 1110 | 1110 | 1110 | 1110 | 1110 | 1110 | 1110 | 1110 | 1110 | 1110 | 1110 |
| Sn-11 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |
| Sn-12 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 | 0001 |
| Sn-13 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |
| Sn-14 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |
| Sn-15 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 |
| Sn-16 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 |
| Sn-17 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 |
| Sn-18 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 |
| Sn-19 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| Sn-20 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| Sn-21 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| Sn-22 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 |
| Sn-23 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| Sn-24 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| Sn-25 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |
| Sn-26 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |
| Sn-27 | 0010 | 0010 | 0010 | 0010 | 0010 | 0010 | 0010 | 0010 | 0010 | 0010 | 0010 | 0010 |
| Sn-28 | 0100 | 0100 | 0100 | 0100 | 0100 | 0100 | 0100 | 0100 | 0100 | 0100 | 0100 | 0100 |
| | | | | | | | | | | | | |
| Cn-01 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 |
| Cn-02 | 168.00 | 252.00 | 252.00 | 202.00 | 202.00 | 268.00 | 168.00 | 202.00 | 253.00 | 166.00 | 253.00 | 253.00 |
| Cn-03 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 | 230.00 |
| Cn-04 | 66.00 | 70.00 | 70.00 | 70.00 | 70.00 | 150.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 |
| Cn-05 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 |
| Cn-06 | 110.00 | 110.00 | 130.00 | 110.0 | 110.00 | 52.00 | 130.00 | 125.00 | 130.00 | 130.00 | 110.00 | 110.00 |
| Cn-07 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Cn-08 | 8.00 | 8.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 7.00 | 6.00 | 6.00 | 6.00 | 8.00 |

## Magnetek Spindle Drive Parameter List (503):

| Copy Unit: | | | A:SEL-1 | A:SEL-2 | A:SEL-3 | B:SEL-1 | A:SEL-3 | | B:SEL-2 | | B:SEL-3 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Haas Model | VF-1 | VF-0, 1, 2 | VF-0 | VF-1, 2, 3* | VF-3, 4 | VF-1, 2, 3, 4 | VF-0 | VF-0 | HS-1 | HS-1 | HL-1 | HL-1h |
| Max RPM: | 5000 | 7500 | 7500 | 7500 | 7500 | 10k | 10k | 12k | 7500 | 10k | 3500 | 5000 |
| Motor Hp: | 5/7.5 | 5/7.5 | 7.5/10 | 7.5/10 | 10/15 | 7.5/10 | 7.5/10 | 7.5/10 | 10/15 | 10/15 | 10/15 | 10/15 |
| Drive Model | DS307 | DS307 | DS308 | DS308 | DS309 | DS309 | DS308 | DS308 | DS309 | DS309 | DS309 | DS309 |
| Parameter | | | | | | | | | | | | |
| Cn-09 | 17.10 | 17.10 | 25.60 | 25.60 | 34.00 | 34.00 | 25.60 | 25.60 | 34.00 | 34.00 | 34.00 | 34.00 |
| Cn-10 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 0.50 | 0.50 |
| Cn-11 | 50.00 | 50.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 40.00 | 40.00 |
| Cn-12 | 0.50 | 0.50 | 0.50 | 0.50 | 0.40 | 0.40 | 0.50 | 0.50 | 0.40 | 0.40 | 0.40 | 0.40 |
| Cn-13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cn-14 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Cn-15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cn-16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cn-17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cn-18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cn-19 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Cn-20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cn-21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cn-22 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Cn-23 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| Cn-24 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| Cn-25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cn-26 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 |
| Cn-27 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| Cn-28 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 |
| Cn-29 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 | 50.00 | 70.00 | 70.00 | 70.00 |
| Cn-30 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 | 170.00 |
| Cn-31 | 0.434 | 0.241 | 0.241 | 0.241 | 0.241 | 0.241 | 0.241 | 0.241 | 0.241 | 0.241 | 0.241 | 0.241 |
| Cn-32 | 172.00 | 262.00 | 262.00 | 262.00 | 262.00 | 262.00 | 262.00 | 262.00 | 262.00 | 262.00 | 262.00 | 262.00 |
| Cn-33 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 |
| Cn-34 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Cn-35 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Cn-36 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Cn-37 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Cn-38 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 |
| Cn-39 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Cn-40 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Cn-41 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Cn-42 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |

# Magnetek (G515)

## Spindle Drive Programming

Once the drive is powered up:

- Press <**MENU**>
- Press <∧> until you reach PROGRAMMING, then Press <**DATA/ENTER**>
- Browse the parameter list using the <∧> <∨>. Change the necessary parameters to match the following list.
- **NOTE:** The parameters are set-up in branches. A, B, C, etc. Scroll/Browse to the different branches using the <∧> <∨>. When you get to a branch where you want to make a change, you can enter the branch by pressing <**ENTER**>. Now that you are in the branch you can scroll/browse through the branch by using the <∧> <∨>. When you get to a parameter you want to change, enter the new value, then arrow to the next parameter in the branch you want to change. Continue until all the parameters in that branch that needed to be modified are changed. You can exit the branch by pressing <**ESC**>. Continue until all the necessary parameters have been modified as per the following list:

# Magnetek Spindle Drive Parameter List (G515):

| File Name: | - | - | LG5-VF0 | LG5-VF0k | LG5-VF16 | BG5-VF0 | BG5-VF0k | BF5-VF16 | GPD515 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Motor Mfg | **Lincoln Toshiba** | **Lincoln Toshiba** | **Lincoln** | **Lincoln** | **Lincoln** | **Baldor** | **Baldor** | **Baldor** | **Lincoln** | |
| Haas Model | **VF-1,2** | **VF-1,2** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **50 Taper** | |
| Max RPM: | **5000** | **7500** | **7500** | **10k** | **7500** | **7500** | **10k** | **7500** | | |
| Motor Hp: | **5** | **5/7.5** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | | |
| **Parameter** | **default** = use default value | | | | | | | | | **Description** |
| A1-00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | language select |
| A1-01 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | **default** | parameter access level |
| A1-02 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | **default** | control method sel |
| A1-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | initialize parameters |
| A1-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | password |
| | | | | | | | | | | |
| A2-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 1 |
| A2-02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 2 |
| A2-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 3 |
| A2-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 4 |
| A2-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 5 |
| A2-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 6 |
| A2-07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 7 |
| A2-08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 8 |
| A2-09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 9 |
| A2-10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 10 |
| A2-11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 11 |
| A2-12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 12 |
| A2-13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 13 |
| A2-14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 14 |
| A2-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 15 |
| A2-16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 16 |
| A2-17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 17 |
| A2-18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 18 |
| A2-19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 19 |
| A2-20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 20 |
| A2-21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 21 |
| A2-22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 22 |
| A2-23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 23 |
| A2-24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 24 |
| A2-25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 25 |
| A2-26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 26 |
| A2-27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 27 |
| A2-28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 28 |
| A2-29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 29 |
| A2-30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 30 |
| A2-31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 31 |
| A2-32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | user parameter 32 |

# Magnetek Spindle Drive Parameter List (G515):

| File Name: | - | - | LG5-VF0 | LG5-VF0k | LG5-VF16 | BG5-VF0 | BG5-VF0k | BF5-VF16 | GPD515 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Motor Mfg | **Lincoln Toshiba** | **Lincoln Toshiba** | **Lincoln** | **Lincoln** | **Lincoln** | **Baldor** | **Baldor** | **Baldor** | **Lincoln** | |
| Haas Model | **VF-1,2** | **VF-1,2** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **50 Taper** | |
| Max RPM: | **5000** | **7500** | **7500** | **10k** | **7500** | **7500** | **10k** | **7500** | | |
| Motor Hp: | **5** | **5/7.5** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | | |
| **Parameter** | **default** = use default value | | | | | | | | | **Description** |
| B1-01 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | reference sel |
| B1-02 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | operation method sel |
| B1-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | stopping method sel |
| B1-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | reverse operation prohibit |
| B1-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | zero speed operation |
| B1-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **0** | cntl input scan rate |
| B1-07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | local/remote run sel |
| | | | | | | | | | | |
| B2-01 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | **5** | DC inj brk start freq |
| B2-02 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | **default** | DC inj brk current |
| B2-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | DC inj brk time at start |
| B2-04 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | **0.05** | DC inj brk time at stop |
| | | | | | | | | | | |
| B3-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | speed search sel |
| B3-02 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | **default** | speed search current |
| B3-03 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | **default** | speed search dec time |
| | | | | | | | | | | |
| B4-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | time function ON delay time |
| B4-02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | time function OFF delay time |
| | | | | | | | | | | |
| B5-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | PID cntl mode |
| B5-02 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | PID proportional gain |
| B5-03 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | PID integral time |
| B5-04 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | **default** | PID integral limit |
| B5-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | PID differential time |
| B5-06 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | **default** | PID output limit |
| B5-07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | PID offset adjustment |
| B5-08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | PID delay time |
| | | | | | | | | | | |
| B6-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | dwell freq @ start |
| B6-02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | dwell freq @ start |
| B6-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | dwell freq @ start |
| B6-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | dwell freq @ start |
| | | | | | | | | | | |
| B7-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | droop cntl gain |
| B7-02 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | **default** | droop cntl delay time |
| | | | | | | | | | | |
| B8-01 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | **default** | energy saving gain |
| B8-02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | energy saving delay time |
| | | | | | | | | | | |
| B9-01 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 50 | zero servo gain |
| B9-02 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 50 | zero servo count |

# Magnetek Spindle Drive Parameter List (G515):

| File Name: | - | - | LG5-VF0 | LG5-VF0k | LG5-VF16 | BG5-VF0 | BG5-VF0k | BF5-VF16 | GPD515 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Motor Mfg | **Lincoln Toshiba** | **Lincoln Toshiba** | **Lincoln** | **Lincoln** | **Lincoln** | **Baldor** | **Baldor** | **Baldor** | **Lincoln** | |
| Haas Model | **VF-1,2** | **VF-1,2** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **50 Taper** | |
| Max RPM: | **5000** | **7500** | **7500** | **10k** | **7500** | **7500** | **10k** | **7500** | | |
| Motor Hp: | **5** | **5/7.5** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | | |
| **Parameter** | **default** = use default value | | | | | | | | | **Description** |
| C1-01 | 2.5 | 2.5 | 2.5 | 3.5 | 2.5 | 2.5 | 3.5 | 2.5 | **3** | accel time 1 |
| C1-02 | 2.5 | 2.5 | 2.5 | 3.5 | 2.5 | 2.5 | 3.5 | 2.5 | **4** | decel time 1 |
| C1-03 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | **default** | accel time 2 |
| C1-04 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | **default** | decel time 2 |
| C1-05 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | **default** | accel time 3 |
| C1-06 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | **default** | decel time 3 |
| C1-07 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | **2** | accel time 4 |
| C1-08 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | **2** | decel time 4 |
| C1-09 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | **default** | fast stop delay time |
| C1-10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **0.01** | acc/dec time units |
| C1-11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **60** | acc/dec time sw freq |
| | | | | | | | | | | |
| C2-01 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | **0** | S curve @ acc start |
| C2-02 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | **0** | S curve @ acc end |
| C2-03 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | **0** | S curve @ dec start |
| C2-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | S curve @ dec end |
| | | | | | | | | | | |
| C3-01 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | slip comp gain |
| C3-02 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | **default** | slip comp delay time |
| C3-03 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | **default** | slip comp limit |
| C3-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | slip comp during regen |
| | | | | | | | | | | |
| C4-01 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | torque comp gain |
| C4-02 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | **default** | torque comp time |
| | | | | | | | | | | |
| C5-01 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | **60** | ASR proportional gain 1 |
| C5-02 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | **0.2** | ASR integral time 1 |
| C5-03 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | **default** | ASR proportional gain 2 |
| C5-04 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | **0.1** | ASR integral time 2 |
| C5-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ASR integral limit |
| C5-06 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | **default** | ASR delay time |
| C5-07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1.5** | ASR gain sw freq |
| | | | | | | | | | | |
| C6-01 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | **default** | carrioer freq up limit |
| C6-02 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | **default** | carrioer freq low limit |
| C6-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | carrioer freq proportional gain |
| | | | | | | | | | | |
| C7-01 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | hunt prevention set |
| C7-02 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | default | hunt prevention gain |
| | | | | | | | | | | |
| C8-08 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | default | AFR gain |
| C8-30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | carrier in tune |

# Magnetek Spindle Drive Parameter List (G515):

| File Name: | - | - | LG5-VF0 | LG5-VF0k | LG5-VF16 | BG5-VF0 | BG5-VF0k | BF5-VF16 | GPD515 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Motor Mfg | **Lincoln Toshiba** | **Lincoln Toshiba** | **Lincoln** | **Lincoln** | **Lincoln** | **Baldor** | **Baldor** | **Baldor** | **Lincoln** | |
| Haas Model | **VF-1,2** | **VF-1,2** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **50 Taper** | |
| Max RPM: | **5000** | **7500** | **7500** | **10k** | **7500** | **7500** | **10k** | **7500** | | |
| Motor Hp: | **5** | **5/7.5** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | | |
| **Parameter** | **default** = use default value | | | | | | | | | **Description** |
| D1-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref1 |
| D1-02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref2 |
| D1-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref3 |
| D1-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref4 |
| D1-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref5 |
| D1-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref6 |
| D1-07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref7 |
| D1-08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref8 |
| D1-09 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | **default** | jog freq ref |
| | | | | | | | | | | |
| D2-01 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | **default** | ref upper limit |
| D2-02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref low limit |
| | | | | | | | | | | |
| D3-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | cirt freq rejection 1 |
| D3-02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | cirt freq rejection 2 |
| D3-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | cirt freq rejection 3 |
| D3-04 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | cirt req reject width |
| | | | | | | | | | | |
| D4-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | freq ref hold |
| D4-02 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | **default** | speed limit |
| | | | | | | | | | | |
| D5-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | torque cntl sel |
| D5-02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | torque ref filter |
| D5-03 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | speed limit sel |
| D5-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | speed limit value |
| D5-05 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | **default** | speed limit bias |
| D5-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref hold time |
| | | | | | | | | | | |
| E1-01 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | **default** | input voltage |
| E1-02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | motor sel |
| E1-03 | F | F | F | F | F | F | F | F | **default** | v/f sel |
| E1-04 | 168 | 252 | 253 | 168 | 202 | 253 | 168 | 202 | 166.7 | max freq |
| E1-05 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | **default** | max voltage |
| E1-06 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 70 | base freq |
| E1-07 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | **default** | mid freq A |
| E1-08 | 12.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | **default** | mid volt A |
| E1-09 | 0.5 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | **default** | min freq |
| E1-10 | 6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | **default** | min volt |
| E1-11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | mid freq B |
| E1-12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | mid volt B |
| E1-13 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | **default** | base voltage |
| | | | | | | | | | | |
| E2-01 | 17.1 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 58 | motor rated FLA |
| E2-02 | 1.5 | 1.32 | 1.32 | 1.32 | 1.32 | 0.81 | 0.81 | 0.81 | 0.65 | motor rated slip |
| E2-03 | 5.31 | 12.35 | 12.35 | 12.35 | 12.35 | 13.27 | 13.27. | 13.27 | 24 | no-load current |
| E2-04 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | **default** | # of poles |
| E2-05 | 0.434 | 0.384 | 0.384 | 0.384 | 0.384 | 0.227 | 0.227 | 0.227 | 0.161 | terminal resistance |
| E2-06 | 15.5 | 15.5 | 15.5 | 15.5 | 15.5 | 15.5 | 15.5 | 15.5 | **default** | leakage inductance |
| E2-07 | 0.47 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.38 | saturation comp 1 |
| E2-08 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.58 | saturation comp 2 |
| E2-09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | mechanical loss |

# Magnetek Spindle Drive Parameter List (G515):

| File Name: | - | - | LG5-VF0 | LG5-VF0k | LG5-VF16 | BG5-VF0 | BG5-VF0k | BF5-VF16 | GPD515 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Motor Mfg | **Lincoln Toshiba** | **Lincoln Toshiba** | **Lincoln** | **Lincoln** | **Lincoln** | **Baldor** | **Baldor** | **Baldor** | **Lincoln** | |
| Haas Model | **VF-1,2** | **VF-1,2** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **50 Taper** | |
| Max RPM: | **5000** | **7500** | **7500** | **10k** | **7500** | **7500** | **10k** | **7500** | | |
| Motor Hp: | **5** | **5/7.5** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | | |
| **Parameter** | **default** = use default value | | | | | | | | | **Description** |
| F1-01 | 1024 | 1024 | 1024 | 1024 | 1024 | 1024 | 1024 | 1024 | **2000** | encoder pulses/rev |
| F1-02 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | encoder feedback loss sel |
| F1-03 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | encoder over speed sel |
| F1-04 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | **default** | encoder deviation sel |
| F1-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | encoder rotation sel |
| F1-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | encoder output ratio |
| F1-07 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | encoder ramp P1/1 sel |
| F1-08 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | **default** | encoder  over speed level |
| F1-09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **2** | encoder over speed time |
| F1-10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | **50** | encoder deviate level |
| F1-11 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | **default** | encoder deviate time |
| F1-12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | encoder # gear teeth 1 |
| F1-13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | encoder # gear teeth 2 |
| F1-14 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | **default** | encoder open ckt detect time |
| | | | | | | | | | | |
| F2-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | AI-14 bi/uni polar input sel |
| | | | | | | | | | | |
| F3-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | DI input |
| | | | | | | | | | | |
| F4-01 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | **default** | AO ch1 sel |
| F4-02 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | AO ch1 gain |
| F4-03 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | **default** | AO ch2 sel |
| F4-04 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | **default** | AO ch2 gain |
| | | | | | | | | | | |
| F5-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | DO-02 ch1 sel |
| F5-02 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | DO-02 ch2 sel |
| | | | | | | | | | | |
| F6-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | DO-08 sel |
| | | | | | | | | | | |
| F7-01 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | default | PO-36F sel |

# Magnetek Spindle Drive Parameter List (G515):

| File Name: | - | - | LG5-VF0 | LG5-VF0k | LG5-VF16 | BG5-VF0 | BG5-VF0k | BF5-VF16 | GPD515 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Motor Mfg | **Lincoln Toshiba** | **Lincoln Toshiba** | **Lincoln** | **Lincoln** | **Lincoln** | **Baldor** | **Baldor** | **Baldor** | **Lincoln** | |
| Haas Model | **VF-1,2** | **VF-1,2** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **50 Taper** | |
| Max RPM: | **5000** | **7500** | **7500** | **10k** | **7500** | **7500** | **10k** | **7500** | | |
| Motor Hp: | **5** | **5/7.5** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | | |
| **Parameter** | **default** = use default value | | | | | | | | | **Description** |
| H1-01 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | **72** | term 3 sel, (Mot OH/N.C.) |
| H1-02 | 14 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | **default** | term 4 sel, (Reset input) |
| H1-03 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | **default** | term 5 sel |
| H1-04 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | **default** | term 6 sel |
| H1-05 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | **default** | term 7 sel |
| H1-06 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | **default** | term 8 sel |
| | | | | | | | | | | |
| H2-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **33** | term 9 & 10 sel |
| H2-02 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | term 25 & 26 sel |
| H2-03 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | **default** | term 26 & 27 sel |
| | | | | | | | | | | |
| H3-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | term 13 signal |
| H3-02 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | **default** | term 13 gain |
| H3-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | term 13 bias |
| H3-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | term 16 signal |
| H3-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | term 16 sel |
| H3-06 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | **default** | term 16 gain |
| H3-07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | term 16 bias |
| H3-08 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | **default** | term 14 signal |
| H3-09 | 1F | 1F | 1F | 1F | 1F | 1F | 1F | 1F | **default** | term 14 sel |
| H3-10 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | **default** | term 14 gain |
| H3-11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | term 14 bias |
| H3-12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | filter average time |
| | | | | | | | | | | |
| H4-01 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | **3** | term 21 sel |
| H4-02 | 0.5 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | **0.25** | term 21 gain |
| H4-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | term 21 bias |
| H4-04 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | **default** | term 23 sel |
| H4-05 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | **default** | term 23 gain |
| H4-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | term 23 bias |
| H4-07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | AO level sel |
| | | | | | | | | | | |
| H5-01 | 1F | 1F | 1F | 1F | 1F | 1F | 1F | 1F | **default** | serial comm address |
| H5-02 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | default | serial baud rate |
| H5-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | serial parity sel |
| H5-04 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | **default** | serial fault sel |
| H5-05 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | comm error (CE) detect |

# Magnetek Spindle Drive Parameter List (G515):

| File Name: | - | - | LG5-VF0 | LG5-VF0k | LG5-VF16 | BG5-VF0 | BG5-VF0k | BF5-VF16 | GPD515 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Motor Mfg | **Lincoln Toshiba** | **Lincoln Toshiba** | **Lincoln** | **Lincoln** | **Lincoln** | **Baldor** | **Baldor** | **Baldor** | **Lincoln** | |
| Haas Model | **VF-1,2** | **VF-1,2** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **VF-0** | **VF-0** | **VF-1-6 HS-X** | **50 Taper** | |
| Max RPM: | **5000** | **7500** | **7500** | **10k** | **7500** | **7500** | **10k** | **7500** | | |
| Motor Hp: | **5** | **5/7.5** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | **10/15** | | |
| **Parameter** | **default** = use default value | | | | | | | | | **Description** |
| L1-01 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | MOL fault sel |
| L1-02 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | **default** | MOL time const |
| | | | | | | | | | | |
| L2-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | power loss sel |
| L2-02 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | **default** | power loss ridethru time |
| L2-03 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | **default** | power loss baseblock time |
| L2-04 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | **default** | power loss v/f ramp time |
| L2-05 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | 190 | **default** | PUV det level |
| L2-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | KEB freq |
| | | | | | | | | | | |
| L3-01 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | stall prevent accel sel |
| L3-02 | 170 | 195 | 195 | 195 | 195 | 160 | 160 | 160 | **default** | stall prev accel (<base) |
| L3-03 | 70 | 100 | 100 | 100 | 100 | 65 | 65 | 65 | **default** | stall prev accel (>base) |
| L3-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | stall prevent decel sel |
| L3-05 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **default** | stall prevent run sel |
| L3-06 | 170 | 190 | 190 | 190 | 190 | 160 | 160 | 160 | **default** | stall prevent run level |
| | | | | | | | | | | |
| L4-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | speed agree level |
| L4-02 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | **default** | speed agree width |
| L4-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | speed agree level +- |
| L4-04 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | **default** | speed agree with +- |
| L4-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | ref loss sel |
| | | | | | | | | | | |
| L5-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | # of restarts |
| L5-02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | restart sel |
| | | | | | | | | | | |
| L6-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | torque det 1 sel |
| L6-02 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | **default** | torque det 1 level |
| L6-03 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | **default** | torque det 1 time |
| L6-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **default** | torque det 2 sel |
| L6-05 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | **default** | torque det 2level |
| L6-06 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | **default** | torque det 2 time |
| | | | | | | | | | | |
| L7-01 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | **300** | torque limit fwd |
| L7-02 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | **300** | torque limit rev |
| L7-03 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | **300** | torque limit fwd regen |
| L7-04 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | **300** | torque limit rev regen |
| | | | | | | | | | | |
| L8-01 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | default | DB resistor prot |
| L8-02 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | default | overheat pre-alarm level |
| L8-03 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | default | overheat pre-alarm sel |
| L8-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | phase loss in sel |
| L8-07 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | default | phase loss out sel |
| | | | | | | | | | | |
| O1-01 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | default | user monitor sel |
| O1-02 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | default | power on monitor |
| O1-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | display scaling |
| O1-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | display units |
| O1-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | address display |
| | | | | | | | | | | |
| O2-01 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | default | local/remote key |
| O2-02 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | default | operator stop key |
| O2-03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | user defaults |
| O1-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | operator M.O.P. |
| O2-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | default | operator detection |
| O2-07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | elapsed time set |
| O2-08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | default | elapsed time run |
| O2-09 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | default | init mode sel |

# Mitsubishi A200E

## Spindle Drive Programming

The Mitsubishi A200E spindle drive uses many parameters. Using the Parameter Unit (PU) **Part # 94-5001**, the required parameters can be selected and their values set and/or changed in accordance with the following parameter list.

Once the drive is powered up, make sure the spindle drive parameters are initialized by performing the following:

- Plug the PU into the front of the spindle drive
- Press <**PU OP**> *The frequency setting screen is displayed*
- Press <**SET**> *The spindle drive is placed in the parameter setting mode*
- Type 77 *The screen for parameter 77 is displayed*
- Press <**READ**> *The current value for parameter 77 is displayed*
- Type 701 *The new set value is shown on the display*
- Press <**WRITE**> *The new value is stored into memory*
- Type 96 then ➢ Press <**READ**> *The current value for parameter 96 is displayed*
- Type 9 *The new set value is shown on the display*
- Press <**WRITE**> *The new value is stored into memory*
- Type 40 then ➢ Press <**READ**> *The current value for parameter 40 is displayed*
- Type 1238 *The new set value is shown on the display*
- Press <**WRITE**> *The new value is stored into memory*
- Type 22 then ➢ Press <**READ**> *The current value for parameter 22 is displayed*
- Type 3 *The new set value is shown on the display*
- Press <**WRITE**> *The new value is stored into memory*
- Type 77 then ➢ Press <**READ**> *The current value for parameter 77 is displayed*
- Type 2 *The new set value is shown on the display*
- Press <**WRITE**> *The new value is stored into memory*

The drive is now initialized with default parameters.
To customize the drive perform the following:

- Press <**PU OP**> *The frequency setting screen is displayed*
- Press <**SET**> *The spindle drive is placed in the parameter setting mode*
- Type 0 *The screen for parameter 0 is displayed*
- Press <**READ**> *The current value for parameter 0 is displayed*
  If the value is correct Press <**SHIFT**> to go to the next parameter
  If the value is incorrect do the next step.
- Type (The correct value as listed on the following parameter list) *The new set value is shown on the display*
- Press <**WRITE**> *The new value is stored into memory*
- **NOTE:** You can step through the parameters by pressing <**SHIFT**>. You can jump to a parameter by performing the following: Press <**SET**>, Type the parameter you want to go to, Press <**READ**> to read the current value. Verify all the parameters are correct and make necessary changes in accordance with the following parameter list.

# Mitsubishi A200E Spindle Drive Parameter List (VF/HS)

| Haas Model | VF-0 | VF-12 | VF-12HT HSgrb VF-346 | VF-12346 | Hi Torq VF/HS grb | VF-0 | VF-0 | No grb HS-1-HS-X | No grb HS-1 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Max RPM: | 7500 | 7500 | 7500 | 10k | 10k | 10k | 10k | 7500 | 10k | |
| Motor Hp: | 7.5/10 | 7.5/10 | 10/15 | 7.5 Δ | 10 Δ | 10 Δ | 7.5/10 | 10/15 | 10/15 | |
| Drive Hp | 7.5 | 7.5 | 10 | 10 | 15 | 15 | 7.5 | 10 | 10 | DESCRIPTION |
| Parameter | 3/96 | 3/96 | 3/96 | 7/96 | 12/96 | 9/96 | 3/96 | 3/96 | 3/96 | date of last change |
| 0 | 3.2 | 3.2 | 3.2 | 2.5 | 1.5 | 2.5 | 3.2 | 3.2 | 3.2 | torque boost, (manual) |
| 1 | 253 | 202 | 202 | 268 | 268 | 168 | 168 | 253 | 168 | max frequency |
| 2 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | min frequency |
| 3 | 69 | 69 | 69 | 110 | 115 | 110 | 69 | 69 | 69 | v/f base frequency |
| 4 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | multi-speed setting: 1st, (low spd) |
| 5 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | multi-speed setting: 2nd, (med spd) |
| 6 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | multi-speed setting: 3rd, (hi spd) |
| 7 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | acceleration time, sec |
| 8 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | deceleration time, sec |
| 9 | 24 | 24 | 33 | 33 | 45 | 45 | 24 | 33 | 33 | motor current 100%, amps |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | DC dynamic brake op frequency |
| 11 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | DC dynamic brake brake time |
| 12 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | DC dynamic brake brake voltage |
| 13 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | minimum frequency |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | applied load pattern selection |
| 15 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | jog frequency |
| 16 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | jog accel/decel time |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | external thermal relay input |
| 18 | 253 | 202 | 202 | 268 | 268 | 168 | 168 | 253 | 168 | maximum frequency limit |
| 19 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | base frequency voltage |
| 20 | 253 | 202 | 202 | 268 | 268 | 168 | 168 | 253 | 168 | accel/decel reference frequency |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | accel/decel time increment |
| 22 | 170 | 170 | 170 | 150 | 150 | 150 | 170 | 170 | 170 | stall prevention level |
| 23 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | stall prevention op level at 2x spd |
| 24 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | multi-speed setting: 4th |
| 25 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | multi-speed setting: 5th |
| 26 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | multi-speed setting: 6th |
| 27 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | multi-speed setting: 7th |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | multi-speed input compensation |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | accel/decel pattern selection |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | regen brake op factor selection |
| 31 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 1A |
| 32 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 1B |
| 33 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 2A |
| 34 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 2B |
| 35 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 3A |
| 36 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 3B |
| 37 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | speed indication |
| 38 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | auto torque boost |
| 39 | 23.4 | 23.4 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | auto torque boost op start current |
| 40 | 1238 | 1238 | 1238 | 1238 | 1238 | 1238 | 1238 | 1238 | 1238 | output terminal assignment |
| 41 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | up-to-frequency sensitivity |
| 42 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | output frequency detection |
| 43 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | output freq detect at rev rotation |
| 44 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | second accel/decel time |
| 45 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | second decel time |
| 46 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | second torque boost |
| 47 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | second v/f base frequency |
| 48 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 2nd stall prevent op level, (current) |
| 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2nd stall prevent op level, (freq) |
| 50 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 2nd output frequency detection |
| 51 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | inverter LED display data selection |
| 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | PU main display data selection |
| 53 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | PU level display data selection |
| 54 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | 102 | FM terminal function selection |
| 55 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | frequency monitoring reference |
| 56 | 96 | 96 | 132 | 132 | 180 | 180 | 96 | 132 | 132 | current monitoring reference |

# Mitsubishi A200E Spindle Drive Parameter List (VF/HS)

| Haas Model | VF-0 | VF-12 | VF-12HT HSgrb VF-346 | VF-12346 | Hi Torq VF/HS grb | VF-0 | VF-0 | No grb HS-1-HS-X | No grb HS-1 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Max RPM: | 7500 | 7500 | 7500 | 10k | 10k | 10k | 10k | 7500 | 10k | |
| Motor Hp: | 7.5/10 | 7.5/10 | 10/15 | 7.5 Δ | 10 Δ | 10 Δ | 7.5/10 | 10/15 | 10/15 | |
| Drive Hp | 7.5 | 7.5 | 10 | 10 | 15 | 15 | 7.5 | 10 | 10 | DESCRIPTION |
| Parameter | | | | | | | | | | |
| 57 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | restart coasting time |
| 58 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | restart rise time |
| 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | remote setting function selection |
| 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | intelligent mode selection |
| 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | retry selection |
| 66 | 70 | 70 | 70 | 150 | 150 | 150 | 70 | 70 | 70 | stall prev op reduction start frequency |
| 67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | number of retries at alarm occur |
| 68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | retry waiting time |
| 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | retry count display erasure |
| 70 | 30 | 30 | 30 | 30 | 0 | 0 | 30 | 30 | 30 | special regen brake op factor |
| 71 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | applied motor |
| 72 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | PWM frequency selection |
| 73 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 to 5v or 0 to 10v selection |
| 74 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | input filter time constant |
| 75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | reset selection |
| 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | alarm code output selection |
| 77 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | parameter write disable selection |
| 78 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | rev rotation prevention selection |
| 79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | op mode selection |
| 80 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | motor capacity |
| 81 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | number of motor poles |
| 95 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | mfg setting |
| 96 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | auto tune |
| 100 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | v/f 1 hz |
| 101 | 11.3 | 11.3 | 113. | 6.3 | 5 | 6.3 | 11.3 | 11.3 | 11.3 | v/f 1 volts |
| 102 | 5 | 5 | 5 | 10 | 10 | 10 | 5 | 5 | 5 | v/f 2 hz |
| 103 | 19.2 | 19.2 | 19.2 | 15.6 | 15.6 | 15.6 | 19.2 | 19.2 | 19.2 | v/f 2 volts |
| 104 | 10 | 10 | 10 | 30 | 30 | 30 | 10 | 10 | 10 | v/f 3 hz |
| 105 | 34.9 | 34.9 | 34.9 | 45 | 45 | 45 | 34.9 | 34.9 | 34.9 | v/f 3 volts |
| 106 | 30 | 30 | 30 | 50 | 50 | 50 | 30 | 30 | 30 | v/f 4 hz |
| 107 | 100.7 | 100.7 | 100.7 | 73 | 73 | 73 | 100.7 | 100.7 | 90 | v/f 4 volts |
| 108 | 50 | 50 | 50 | 80 | 80 | 80 | 50 | 50 | 50 | v/f 5 hz |
| 109 | 166.9 | 166.9 | 145 | 120 | 120 | 120 | 166.9 | 166.9 | 145 | v/f 5 volts |
| 114 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | in position zone |
| 134 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | reley output selection |
| 135 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | analog meter output selection |
| 136 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | analog meter offset |
| 137 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | analog meter gain |
| 145 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | sw option |
| 147 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | sw option |
| 148 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | sw option |
| 149 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | sw option |
| 155 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (undefined) |
| 156 | 4 | 4 | 4 | 0 | 0 | 0 | 4 | 4 | 4 | (undefined) |
| 157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (undefined) |
| 158 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | (undefined) |
| 159 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (undefined) |
| 901 | | load | meter | calibration | | | | | | AM terminal position calibration |
| 902 | 0hz @0% | 0hz @0% | 0hz @0% | 0hz @0% | 0hz @0% | 0hz @0% | 0hz @0% | 0hz @0% | 0hz @0% | frequency setting voltage bias |
| 903 | 253hz @100% | 202hz @100% | 202hz @100% | 268hz @100% | 268hz @100% | 168hz @100% | 168hz @100% | 253hz @100% | 168hz @100% | frequency setting voltage gain |
| 904/905 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | frequence setting current bias/gain |

# Mitsubishi A200E Spindle Drive Parameter List (HL)

| Haas Model | HL-1 | HL-1h | HL-1h | HL-1h | HL-4 w/grb | HL-4 | |
|---|---|---|---|---|---|---|---|
| Max RPM: | 3750 | 5k 2:3 | 5k 2:3 | 5k 5:6 | 3400 | 3400 | |
| Motor Hp: | 10/15 | 10/15 | 7.5 Δ | 10/15 | 20/30 | 20/30 | |
| Drive Hp | 10 | 10 | 10 | 10 | 20 | 20 | DESCRIPTION |
| Parameter | 3/96 | 3/96 | 9/96 | 3/96 | 3/96 | 3/96 | date of last change |
| 0 | 3.2 | 3.2 | 2.5 | 3.2 | 2 | 2 | torque boost, (manual) |
| 1 | 253 | 253 | 253 | 202 | 191 | 230 | max frequency |
| 2 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | min frequency |
| 3 | 69 | 69 | 110 | 69 | 69 | 69 | v/f base frequency |
| 4 | 60 | 60 | 60 | 60 | 60 | 60 | multi-speed setting: 1st, (low spd) |
| 5 | 30 | 30 | 30 | 30 | 30 | 30 | multi-speed setting: 2nd, (med spd) |
| 6 | 10 | 10 | 10 | 10 | 10 | 10 | multi-speed setting: 3rd, (hi spd) |
| 7 | 3 | 5 | 9 | 5 | 5 | 5 | acceleration time, sec |
| 8 | 3 | 6 | 11 | 6 | 5 | 5 | deceleration time, sec |
| 9 | 33 | 33 | 33 | 33 | 66 | 66 | motor current 100%, amps |
| 10 | 1 | 1 | 1 | 1 | 4 | 4 | DC dynamic brake op frequency |
| 11 | 0.1 | 0.1 | 0.1 | 0.1 | 0.5 | 0.5 | DC dynamic brake brake time |
| 12 | 3 | 3 | 3 | 3 | 3 | 3 | DC dynamic brake brake voltage |
| 13 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | minimum frequency |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | applied load pattern selection |
| 15 | 5 | 5 | 5 | 5 | 5 | 5 | jog frequency |
| 16 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | jog accel/decel time |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 | external thermal relay input |
| 18 | 253 | 253 | 253 | 202 | 191 | 230 | maximum frequency limit |
| 19 | 230 | 230 | 230 | 230 | 230 | 230 | base frequency voltage |
| 20 | 253 | 253 | 253 | 202 | 191 | 230 | accel/decel reference frequency |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | accel/decel time increment |
| 22 | 170 | 170 | 150 | 170 | 160 | 160 | stall prevention level |
| 23 | 175 | 175 | 175 | 175 | 60 | 60 | stall prevention op level at 2x spd |
| 24 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | multi-speed setting: 4th |
| 25 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | multi-speed setting: 5th |
| 26 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | multi-speed setting: 6th |
| 27 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | multi-speed setting: 7th |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | multi-speed input compensation |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | accel/decel pattern selection |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | regen brake op factor selection |
| 31 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 1A |
| 32 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 1B |
| 33 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 2A |
| 34 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 2B |
| 35 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 3A |
| 36 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | frequency jump 3B |
| 37 | 4 | 4 | 4 | 4 | 4 | 4 | speed indication |
| 38 | 50 | 50 | 50 | 50 | 50 | 50 | auto torque boost |
| 39 | 30 | 30 | 30 | 30 | 42 | 42 | auto torque boost op start current |
| 40 | 1238 | 1238 | 1238 | 1238 | 1238 | 1238 | output terminal assignment |
| 41 | 5 | 5 | 5 | 5 | 5 | 5 | up-to-frequency sensitivity |
| 42 | 6 | 6 | 6 | 6 | 6 | 6 | output frequency detection |
| 43 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | output freq detect at rev rotation |
| 44 | 5 | 5 | 5 | 5 | 10 | 10 | second accel/decel time |
| 45 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | second decel time |
| 46 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | second torque boost |
| 47 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | second v/f base frequency |
| 48 | 150 | 150 | 150 | 150 | 150 | 150 | 2nd stall prevent op level, (current) |
| 49 | 0 | 0 | 0 | 0 | 0 | 0 | 2nd stall prevent op level, (freq) |
| 50 | 30 | 30 | 30 | 30 | 30 | 30 | 2nd output frequency detection |
| 51 | 1 | 1 | 1 | 1 | 1 | 1 | inverter LED display data selection |
| 52 | 0 | 0 | 0 | 0 | 0 | 0 | PU main display data selection |
| 53 | 10 | 10 | 10 | 10 | 10 | 10 | PU level display data selection |
| 54 | 102 | 102 | 102 | 102 | 102 | 102 | FM terminal function selection |
| 55 | 60 | 60 | 60 | 60 | 60 | 60 | frequency monitoring reference |
| 56 | 132 | 132 | 132 | 132 | 264 | 264 | current monitoring reference |

# Mitsubishi A200E Spindle Drive Parameter List (HL)

| Haas Model | HL-1 | HL-1h | HL-1h | HL-1h | HL-4 w/grb | HL-4 | |
|---|---|---|---|---|---|---|---|
| Max RPM: | 3750 | 5k 2:3 | 5k 2:3 | 5k 5:6 | 3400 | 3400 | |
| Motor Hp: | 10/15 | 10/15 | 7.5 Δ | 10/15 | 20/30 | 20/30 | |
| Drive Hp | 10 | 10 | 10 | 10 | 20 | 20 | DESCRIPTION |
| Parameter | | | | | | | |
| 57 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | restart coasting time |
| 58 | 1 | 1 | 1 | 1 | 1 | 1 | restart rise time |
| 59 | 0 | 0 | 0 | 0 | 0 | 0 | remote setting function selection |
| 60 | 0 | 0 | 0 | 0 | 0 | 0 | intelligent mode selection |
| 65 | 0 | 0 | 0 | 0 | 0 | 0 | retry selection |
| 66 | 70 | 70 | 150 | 70 | 70 | 70 | stall prev op reduction start frequency |
| 67 | 0 | 0 | 0 | 0 | 0 | 0 | number of retries at alarm occur |
| 68 | 0 | 0 | 0 | 0 | 0 | 0 | retry waiting time |
| 69 | 0 | 0 | 0 | 0 | 0 | 0 | retry count display erasure |
| 70 | 30 | 30 | 30 | 30 | 0 | 0 | special regen brake op factor |
| 71 | 2 | 2 | 2 | 2 | 2 | 2 | applied motor |
| 72 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | PWM frequency selection |
| 73 | 1 | 1 | 1 | 1 | 1 | 1 | 0 to 5v or 0 to 10v selection |
| 74 | 1 | 1 | 1 | 1 | 1 | 1 | input filter time constant |
| 75 | 0 | 0 | 0 | 0 | 0 | 0 | reset selection |
| 76 | 0 | 0 | 0 | 0 | 0 | 0 | alarm code output selection |
| 77 | 2 | 2 | 2 | 2 | 2 | 2 | parameter write disable selection |
| 78 | 0 | 0 | 0 | 0 | 0 | 0 | rev rotation prevention selection |
| 79 | 0 | 0 | 0 | 0 | 0 | 0 | op mode selection |
| 80 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | motor capacity |
| 81 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | number of motor poles |
| 95 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | mfg setting |
| 96 | 0 | 0 | 0 | 0 | 0 | 0 | auto tune |
| 100 | 2 | 2 | 2 | 2 | 2 | 2 | v/f 1 hz |
| 101 | 11.3 | 11.3 | 11.3 | 11.3 | 6.3 | 6.3 | v/f 1 volts |
| 102 | 5 | 5 | 10 | 5 | 5 | 5 | v/f 2 hz |
| 103 | 19.2 | 19.2 | 15.6 | 19.2 | 19.2 | 19.2 | v/f 2 volts |
| 104 | 10 | 10 | 30 | 10 | 10 | 10 | v/f 3 hz |
| 105 | 34.9 | 34.9 | 45 | 34.9 | 34.9 | 34.9 | v/f 3 volts |
| 106 | 30 | 30 | 50 | 30 | 30 | 30 | v/f 4 hz |
| 107 | 100.7 | 100.7 | 73 | 100.7 | 100.7 | 100.7 | v/f 4 volts |
| 108 | 50 | 50 | 80 | 50 | 50 | 50 | v/f 5 hz |
| 109 | 166.9 | 166.9 | 120 | 166.9 | 166.9 | 166.9 | v/f 5 volts |
| 114 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | in position zone |
| 134 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | reley output selection |
| 135 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | analog meter output selection |
| 136 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | analog meter offset |
| 137 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | analog meter gain |
| 145 | 0 | 0 | 0 | 0 | 0 | 0 | sw option |
| 147 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | sw option |
| 148 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | sw option |
| 149 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | sw option |
| 155 | 0 | 0 | 0 | 0 | 0 | 0 | (undefined) |
| 156 | 0 | 0 | 0 | 0 | 0 | 0 | (undefined) |
| 157 | 0 | 0 | 0 | 0 | 0 | 0 | (undefined) |
| 158 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | (undefined) |
| 159 | 0 | 0 | 0 | 0 | 0 | 0 | (undefined) |
| 901 | | load | meter | calibration | | | AM terminal position calibration |
| 902 | 0hz @0% | 0hz @0% | 0hz @0% | 0hz @0% | 0hz @0% | 0hz @0% | frequency setting voltage bias |
| 903 | 253hz @100% | 253hz @100% | 253hz @100% | 202hz @100% | 191hz @100% | 230hz @100% | frequency setting voltage gain |
| 904/905 | n/a | n/a | n/a | n/a | n/a | n/a | frequence setting current bias/gain |

# Mitsubishi 20 HP A500 Spindle Drive Parameters

Parameters for Mitsubishi 20Hp A500 Spindle Drives (used as a replacement drive for A2x0E drives in HL-)
Note: Set par #18 before other max speed parameter(s), Values different from default are listed in red

Revised Sept 20, 2000//BW

| Mach Model: | VF-x/HS-1 | VF-0 | HL-1/2 | HL-2BB | HL-4(ZF grb) | HL-4(no grb) | |
|---|---|---|---|---|---|---|---|
| Max SP RPM: | 10k | 10k | 5000 | 3400 | 3400 | 3400 | |
| SP Motor Hp: | 10 Delta | 10 Delta | 10 Delta | 20 | 20 | 20 | |
| Parameter# | | | | | | | Function/Description |
| 0 | 1.5 | 2.5 | 3 | 2 | 2 | 2 | Torque Boost (manual) |
| 1 | 268 | 168 | 268 | 230 | 191 | 230 | Maximum Frequency |
| 2 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | Minimum Frequency |
| 3 | 115 | 110 | 110 | 69 | 69 | 69 | V/F Base Frequency |
| 4 | 60 | 60 | 60 | 60 | 60 | 60 | Multi-Speed Setting 1st |
| 5 | 30 | 30 | 30 | 30 | 30 | 30 | Multi-Speed Setting 2nd |
| 6 | 10 | 10 | 10 | 10 | 10 | 10 | Multi-Speed Setting 3rd |
| 7 | 3 | 3 | 4 | 6 | 6 | 6 | Acceleration Time |
| 8 | 3 | 3 | 5 | 6 | 6 | 6 | Deceleration Time |
| 9 | 45 | 45 | 68 | 68 | 68 | 68 | Motor Current 100% (Amps) |
| 10 | 1 | 1 | 4 | 4 | 4 | 4 | DC Dynamic Brake Op Frequency |
| 11 | 0.5 | 0.5 | 0.5 | 0.3 | 0.3 | 0.3 | DC Dynamic Brake Time |
| 12 | 3 | 3 | 3 | 3 | 3 | 3 | DC Dynamic Brake Voltage |
| 13 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | Starting Frequency |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | Applied Load Pattern |
| 15 | 5 | 5 | 5 | 5 | 5 | 5 | Jog Frequency |
| 16 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | Jog Accel/Decel Time |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | Ext Therm Input, MRS/N.O.=0=Coast |
| 18 | 268 | 168 | 268 | 230 | 191 | 230 | Maximum Frequency Limit |
| 19 | 230 | 230 | 230 | 230 | 230 | 230 | Base Frequency Voltage |
| 20 | 268 | 268 | 268 | 230 | 191 | 230 | Accel/Decel Reference Frequency |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | Accel/Decel Time Increments |
| 22 | 150 | 150 | 160 | 160 | 160 | 160 | Stall Prevention Level |
| 23 | 80 | 80 | 110 | 150 | 150 | 150 | Stall Prevention Level at 2x Speed |
| 24 to 27 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Multi-Speed Setting (not used) |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | Multi-Speed Input Comp |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | Accel/Decel Pattern Select |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | Regen Brake Operation Factor |
| 31 to 36 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Jump Frequency (function not used) |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | Speed Indication |
| | | | | | | | |
| 41 | 5% | 5% | 5% | 5% | 5% | 5% | Up-to-frequency Sensetivity |
| 42 | 6 | 6 | 6 | 6 | 6 | 6 | Output Frequency Detection |
| 43 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Output Freq Detect at Reverse Rotation |
| 44 | 10 | 10 | 10 | 10 | 10 | 10 | Second Accel/Decel Time |
| 45 to 47 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Second Boost V/F Base (not used) |
| 48 | 150 | 150 | 150 | 150 | 150 | 150 | 2nd Stall Prev Op Level, Amps |
| 49 | 0 | 0 | 0 | 0 | 0 | 0 | 2nd Stall Prev Op Level, Freq |
| 50 | 30 | 30 | 30 | 30 | 30 | 30 | 2nd Output Frequency Detect |
| | | | | | | | |
| 52 | 0 | 0 | 0 | 0 | 0 | 0 | PU Main Display Data Selection |
| 53 | 10 | 10 | 10 | 10 | 10 | 10 | PU Level Display |
| 54 | 1 | 1 | 1 | 1 | 1 | 1 | FM Terminal Function (not used) |
| 55 | 60 | 60 | 60 | 60 | 60 | 60 | Calibrate FM Terminal |
| 56 | 90 | 90 | 136 | 136 | 136 | 136 | Current Monitoring Reference |
| 57 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Restart Coast Time |
| 58 | 1 | 1 | 1 | 1 | 1 | 1 | Restart Cushion Time |
| 59 | 0 | 0 | 0 | 0 | 0 | 0 | Remote Setting Function Select |
| 60 | 0 | 0 | 0 | 0 | 0 | 0 | Intelligent Mode Select (disabled) |
| 61 to 64 | | | | | | | Intelligent Mode (not used) |
| 65 | 0 | 0 | 0 | 0 | 0 | 0 | Retry Selection |
| 66 | 150 | 150 | 160 | 70 | 70 | 70 | Stall Prev Op Reduction Start Freq |
| 67 | 0 | 0 | 0 | 0 | 0 | 0 | Number of Retries |
| 68 | 1 | 1 | 1 | 1 | 1 | 1 | Retry Waiting Time |
| 69 | 0 | 0 | 0 | 0 | 0 | 0 | Retry Count |
| | | | | | | | |
| 71 | 2 | 2 | 2 | 2 | 2 | 2 | Applied Motor, 2=V/F Curve |
| 72 | 14 | 14 | 14 | 14 | 14 | 14 | PWM Frequency |

# ED# 1019

Mitsubishi 20 HP A500 Spindle Drive Parameters

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 73 | 1 | 1 | 1 | 1 | 1 | 1 | 0-5V or 0-10V Selection |

Revised Sept 20, 2000//BW

| Mach Model: | VF-x/HS-1 | VF-0 | HL-1/2 | HL-2BB | HL-4 grb | HL-4 no grb | |
|---|---|---|---|---|---|---|---|
| SP Max RPM: | 10k | 10k | 5000 | 3400 | 3400 | 3400 | |
| SP Motor Hp: | 10 Delta | 10 Delta | 10 Delta | 20/30 | 20/30 | 20/30 | Function/Description |
| Parameter# | | | | | | | |
| 74 | 1 | 1 | 1 | 1 | 1 | 1 | Input Filter Time Constant |
| 75 | 0 | 0 | 0 | 0 | 0 | 0 | Reset Selection |
| 76 | 0 | 0 | 0 | 0 | 0 | 0 | Alarm Op |
| 77 | 2 | 2 | 2 | 2 | 2 | 2 | Parameter Write Disable |
| 78 | 0 | 0 | 0 | 0 | 0 | 0 | Rev Rotation Prev Selection |
| 79 | 0 | 0 | 0 | 0 | 0 | 0 | Op Mode Select |
| 80 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Motor kW Rating |
| 81 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Motor Number of Poles |
| 82 to 94 | | | | | | | Parameters not used in V/F mode |
| 95 | 0 | 0 | 0 | 0 | 0 | 0 | Advanced Mode |
| 96 | 0 | 0 | 0 | 0 | 0 | 0 | Auto Tune |
| | | | | | | | |
| 100 | 2 | 2 | 2 | 4 | 4 | 4 | Voltage/Frequency point 1: Hz |
| 101 | 5.3 | 6.3 | 5.3 | 13.5 | 13.5 | 13.5 | Voltage/Frequency point 1: Volts |
| 102 | 10 | 10 | 10 | 7 | 7 | 7 | Voltage/Frequency point 2: Hz |
| 103 | 15.6 | 15.6 | 16 | 23 | 23 | 23 | Voltage/Frequency point 2: Volts |
| 104 | 30 | 30 | 30 | 10 | 10 | 10 | Voltage/Frequency point 3: Hz |
| 105 | 45 | 45 | 57 | 34.9 | 34.9 | 34.9 | Voltage/Frequency point 3: Volts |
| 106 | 50 | 50 | 50 | 30 | 30 | 30 | Voltage/Frequency point 4: Hz |
| 107 | 73 | 73 | 100.7 | 100.7 | 100.7 | 100.7 | Voltage/Frequency point 4: Volts |
| 108 | 80 | 80 | 80 | 50 | 50 | 50 | Voltage/Frequency point 5: Hz |
| 109 | 120 | 120 | 130 | 166.9 | 166.9 | 166.9 | Voltage/Frequency point 5: Volts |
| 110 to 113 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Third Functions (not used) |
| 114 | 150 | 150 | 150 | 150 | 150 | 150 | Third Stall Prevention Op Current |
| 115 | 0 | 0 | 0 | 0 | 0 | 0 | Third Stall Prevention Op Freq |
| 116 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Third Stall Prevention Freq Detect |
| 117 | 0 | 0 | 0 | 0 | 0 | 0 | Station Number |
| 118 | 192 | 192 | 192 | 192 | 192 | 192 | Communication Speed |
| 119 | 1 | 1 | 1 | 1 | 1 | 1 | Stop Bit Length |
| 120 | 2 | 2 | 2 | 2 | 2 | 2 | Parity Check |
| 121 | 1 | 1 | 1 | 1 | 1 | 1 | Number of Comm Retries |
| 122 | 0 | 0 | 0 | 0 | 0 | 0 | Comm Check Time Interval |
| 123 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Wait Time Setting |
| 124 | 1 | 1 | 1 | 1 | 1 | 1 | CR/LF Presense |
| 128 | 10 | 10 | 10 | 10 | 10 | 10 | PID Action Selection |
| 129 | 100 | 100 | 100 | 100 | 100 | 100 | PID Proportional Band |
| 130 | 1 | 1 | 1 | 1 | 1 | 1 | PID Integral Time |
| 131 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Upper Limit |
| 132 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Lower Limit |
| 133 | 0 | 0 | 0 | 0 | 0 | 0 | Action Set Point for PU |
| 134 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | PID Differential Time |
| 135 | 0 | 0 | 0 | 0 | 0 | 0 | PSU Switch Over (not used) |
| 136 | 1 | 1 | 1 | 1 | 1 | 1 | PSU Switch Over (not used) |
| 137 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | PSU Switch Over (not used) |
| 138 | 0 | 0 | 0 | 0 | 0 | 0 | PSU Switch Over (not used) |
| 139 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | PSU Switch Over (not used) |
| | | | | | | | |
| 144 | 4 | 4 | 4 | 4 | 4 | 4 | Display Language |
| 145 | 1 | 1 | 1 | 1 | 1 | 1 | ????????????? |
| | | | | | | | |
| 148 | 150 | 150 | 150 | 150 | 150 | 150 | Stall Prevention at 0V Input |
| 149 | 200 | 200 | 200 | 200 | 200 | 200 | Stall Prevention at 10V Input |
| 150 | 150 | 150 | 150 | 150 | 150 | 150 | Output Current Detect Level |
| 151 | 0 | 0 | 0 | 0 | 0 | 0 | Output Current Detect Period |
| 152 | 5 | 5 | 5 | 5 | 5 | 5 | Zero Current Detection Level |
| 153 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | Zero Current Detection Period |
| 154 | 1 | 1 | 1 | 1 | 1 | 1 | VReduction During Stall Prevention |
| 155 | 0 | 0 | 0 | 0 | 0 | 0 | RT Activated Condition |

# ED# 1019

Mitsubishi 20 HP A500 Spindle Drive Parameters

| Mach Model: | VF-x/HS-1 | VF-0 | HL-1/2 | HL-2BB | HL-4 grb | HL-4 no grb | Revised Sept 20, 2000//BW |
|---|---|---|---|---|---|---|---|
| SP Max RPM: | 10k | 10k | 5000 | 3400 | 3400 | 3400 | |
| SP Motor Hp: | 10 Delta | 10 Delta | 10 Delta | 20/30 | 20/30 | 20/30 | Function/Description |
| Parameter# | | | | | | | |
| 156 | 0 | 0 | 0 | 0 | 0 | 0 | Stall Prevention Op Select |
| 157 | 0 | 0 | 0 | 0 | 0 | 0 | OL Signal Wait Time |
| 158 | 17 | 17 | 17 | 17 | 17 | 17 | AM Terminal Function Select |
| | | | | | | | |
| 160 | 0 | 0 | 0 | 0 | 0 | 0 | User Group Read Selection (not used) |
| | | | | | | | |
| 162 | 0 | 0 | 0 | 0 | 0 | 0 | Auto-Restart after Power Fail |
| 163 | 0 | 0 | 0 | 0 | 0 | 0 | First Cushion Time for Restart |
| 164 | 0 | 0 | 0 | 0 | 0 | 0 | First Cushion Voltage for Restart |
| 165 | 150 | 150 | 150 | 150 | 150 | 150 | Restart Stall Prevention OP Level |
| | | | | | | | |
| 168 | 7391 | 7391 | 7391 | 7391 | 7391 | 7391 | MFG Setting |
| 169 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 170 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 171 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | |
| 173 | 0 | 0 | 0 | 0 | 0 | 0 | User Group 1 Registration |
| 174 | 0 | 0 | 0 | 0 | 0 | 0 | Group 1 Deletion |
| 175 | 0 | 0 | 0 | 0 | 0 | 0 | User Group 2 Registration |
| 176 | 0 | 0 | 0 | 0 | 0 | 0 | Group 2 Deletion |
| | | | | | | | |
| 180 | 0 | 0 | 0 | 0 | 0 | 0 | RL Terminal Function |
| 181 | 1 | 1 | 1 | 1 | 1 | 1 | RM Terminal Function |
| 182 | 2 | 2 | 2 | 2 | 2 | 2 | RH Terminal Function |
| 183 | 3 | 3 | 3 | 3 | 3 | 3 | RT Terminal Function |
| 184 | 4 | 4 | 4 | 4 | 4 | 4 | AU Terminal Function |
| 185 | 7 | 7 | 7 | 7 | 7 | 7 | JOG Terminal Function Select |
| 186 | 6 | 6 | 6 | 6 | 6 | 6 | CS Terminal Function |
| | | | | | | | |
| 190 | 0 | 0 | 0 | 0 | 0 | 0 | RUN Terminal Function |
| 191 | 1 | 1 | 1 | 1 | 1 | 1 | SU Terminal Function |
| 192 | 2 | 2 | 2 | 2 | 2 | 2 | IPF Terminal Function |
| 193 | 3 | 3 | 3 | 3 | 3 | 3 | OL Terminal Function |
| 194 | 100 | 100 | 100 | 100 | 100 | 100 | FU Terminal Function Select |
| 195 | 99 | 99 | 99 | 99 | 99 | 99 | Activates ABC contacts on Fault |
| | | | | | | | |
| 199 | 0 | 0 | 0 | 0 | 0 | 0 | Users Initial Value Setting |
| 232 to 239 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Program Set 1-2-3 (not used) |
| 240 | 1 | 1 | 1 | 1 | 1 | 1 | Soft PWM Setting |
| | | | | | | | |
| 244 | 0 | 0 | 0 | 0 | 0 | 0 | Cooling Fan Op Select |
| | | | | | | | |
| 250 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Stop Selection |
| 251 | 1 | 1 | 1 | 1 | 1 | 1 | Output Phase Error Protection Select |
| 252 | 50 | 50 | 50 | 50 | 50 | 50 | Override Bias |
| 253 | 150 | 150 | 150 | 150 | 150 | 150 | Override Gain |
| | | | | | | | |
| 261 | 1 | 1 | 1 | 1 | 1 | 1 | Power Fail Stop Select |
| 262 | 3 | 3 | 3 | 3 | 3 | 3 | Subtracted Frequency at Decel Start |
| 263 | 60 | 60 | 60 | 60 | 60 | 60 | Subtraction Starting Frequency |
| 264 | 6 | 6 | 6 | 6 | 6 | 6 | Power Fail Decel Time 1 |
| 265 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Power Fail Decel Time 2 |
| 266 | 60 | 60 | 60 | 60 | 60 | 60 | Power Fail Decel Time Switch Over F |
| | | | | | | | |

**ED# 1019**

Mitsubishi 20 HP A500 Spindle Drive Parameters

| Mach Model: | VF-x/HS-1 | VF-0 | HL-1/2 | HL-2BB | HL-4 grb | HL-4 no grb | Revised Sept 20, 2000//BW |
|---|---|---|---|---|---|---|---|
| SP Max RPM: | 10k | 10k | 5000 | 3400 | 3400 | 3400 | |
| SP Motor Hp: | 10 Delta | 10 Delta | 10 Delta | 20/30 | 20/30 | 20/30 | Function/Description |
| Parameter# | | | | | | | |
| 270 | 0 | 0 | 0 | 0 | 0 | 0 | Stop on Contact . . . |
| 271 | 50 | 50 | 50 | 50 | 50 | 50 | Hi-Speed Setting Max Current |
| 272 | 100 | 100 | 100 | 100 | 100 | 100 | Mid-Speed Minimum Current |
| 273 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Current Averaging Range |
| 274 | 16 | 16 | 16 | 16 | 16 | 16 | Current Avg Filter Time Constant |
| | | | | | | | |
| 285 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | Overspeed Detect Frequency |
| 286 | 0 | 0 | 0 | 0 | 0 | 0 | Droop Gain |
| 287 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | Droop Filter Constant |
| | | | | | | | |
| 900 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | FM Terminal Calibration |
| 901 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | AM Terminal Calibration |
| 902 | 0Hz @ 0% | 0Hz @ 0% | 0Hz @ 0% | 0Hz @ 0% | 0Hz @ 0% | 0Hz @ 0% | External Voltage Bias |
| 903 | 268Hz@100% | 168Hz@100% | 268Hz@100% | 230Hz@100% | 191Hz@100% | 230Hz@100% | External Voltage Gain |
| 904 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | Frequency Setting Current Bias |
| 905 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | Frequency Setting Current Gain |
| 990 | 1 | 1 | 1 | 1 | 1 | 1 | Beeper on |
| 991 | 53 | 53 | 53 | 53 | 53 | 53 | |