

**MOTION APPLICATION TECHNICAL DOCUMENT**  
*System Applications Engineering Group*

**SUBJECT:           MP940 START UP PROCEDURE**

**Document Type:**    *MP940 Product*

**Topic:**

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**SUMMARY:**

This document outlines the settings for (sTorque\_Limit) for all servopack and motor sizes when used with an MP940.

**ENVIRONMENT:**

SGDH Version : 005  
MP940 Version : A02, A03, A05  
MotionWorks : 3.51 or later  
MotionWorks Plus : 1.5 or later

## Torque Limit Values (%) for OWC002 (sTorque\_Limit)

### SGMAH Standard Servo Motor Rated Values and Specifications

| Voltage             |        | 200V |      |      |     |     |      | 100V |      |     |     |
|---------------------|--------|------|------|------|-----|-----|------|------|------|-----|-----|
| Servo Motor: SGMAH- |        | A3A  | A5A  | 01A  | 02A | 04A | 08A  | A3B  | A5B  | 01B | 02B |
| Rated Output        | kW     | 0.03 | 0.05 | 0.1  | 0.2 | 0.4 | 0.75 | 0.03 | 0.05 | 0.1 | 0.2 |
| Rated Current       | A(rms) | 0.44 | 0.64 | 0.91 | 2.1 | 2.8 | 4.4  | 0.66 | 0.95 | 2.4 | 3.0 |
| Max. Instantaneous  | A(rms) | 1.3  | 2.0  | 2.8  | 6.5 | 8.5 | 13.4 | 2.0  | 2.9  | 7.2 | 9.0 |
| Torque Limit Val    | %      | 295  | 313  | 308  | 310 | 304 | 305  | 303  | 305  | 300 | 300 |

### SGMPH Standard Servo Motor Rated Values and Specifications

| Voltage             |        | 200V |     |     |      |      | 100V |     |
|---------------------|--------|------|-----|-----|------|------|------|-----|
| Servo Motor: SGMPH- |        | 01A  | 02A | 04A | 08A  | 15A  | 01B  | 02B |
| Rated Output        | kW     | 0.1  | 0.2 | 0.4 | 0.75 | 1.5  | 0.1  | 0.2 |
| Rated Current       | A(rms) | 0.89 | 2.0 | 2.6 | 4.1  | 7.5  | 2.2  | 2.7 |
| Max. Instantaneous  | A(rms) | 2.8  | 6.0 | 8.0 | 13.9 | 23.0 | 7.1  | 8.4 |
| Torque Limit Val    | %      | 315  | 300 | 308 | 339  | 307  | 323  | 311 |

### SGMGH Standard Servo Motor (1500 r/min) Rated Values and Specifications

| Voltage             |        | 200V  |       |       |       |       |       |       |       |       |       |
|---------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Servo Motor: SGMGH- |        | 05A□A | 09A□A | 13A□A | 20A□A | 30A□A | 44A□A | 55A□A | 75A□A | 11A□A | 1E□A  |
| Rated Output        | kW     | 0.45  | 0.85  | 1.3   | 1.8   | 2.9   | 4.4   | 5.5   | 7.5   | 11.0  | 15.0  |
| Rated Current       | A(rms) | 3.8   | 7.1   | 10.7  | 16.7  | 23.8  | 32.8  | 42.1  | 54.7  | 58.6  | 78.0  |
| Max. Instantaneous  | A(rms) | 11    | 17.0  | 28    | 42    | 56    | 84    | 110.0 | 130   | 140   | 170.0 |
| Torque Limit Val    | %      | 289   | 239   | 262   | 251   | 235   | 256   | 261   | 238   | 239   | 218   |
| Voltage             |        | 400V  |       |       |       |       |       |       |       |       |       |
| Servo Motor: SGMGH- |        | 05D□A | 09D□A | 13D□A | 20D□A | 30D□A | 44D□A | 55D□A | 75D□A | 11D□A | 1ED□A |
| Rated Output        | kW     | 0.45  | 0.85  | 1.3   | 1.8   | 2.9   | 4.4   | 5.5   | 7.5   | 11.0  | 15.0  |
| Rated Current       | A(rms) | 1.9   | 3.5   | 5.4   | 8.4   | 11.9  | 16.5  | 20.8  | 25.4  | 28.1  | 37.2  |
| Max. Instantaneous  | A(rms) | 5.5   | 8.5   | 14.0  | 20.0  | 28.0  | 40.5  | 55.0  | 65.0  | 70.0  | 85.0  |
| Torque Limit Val    | %      | 289   | 243   | 259   | 238   | 235   | 245   | 264   | 256   | 249   | 228   |

### SGMGH Standard Servo Motor (1000 r/min) Rated Values and Specifications

| Voltage             |        | 200V  |       |       |       |       |       |       |       |
|---------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Servo Motor: SGMGH- |        | 03A□B | 06A□B | 09A□B | 12A□B | 20A□B | 30A□B | 44A□B | 60A□B |
| Rated Output        | kW     | 0.3   | 0.6   | 0.9   | 1.2   | 2.0   | 3.0   | 4.4   | 6.0   |
| Rated Current       | A(rms) | 3.0   | 5.7   | 7.6   | 11.6  | 18.5  | 24.8  | 32.9  | 46.9  |
| Max. Instantaneous  | A(rms) | 7.3   | 13.9  | 16.6  | 28.0  | 42.0  | 56.0  | 84.0  | 110.0 |
| Torque Limit Val    | %      | 243   | 244   | 218   | 241   | 227   | 226   | 255   | 235   |

**Max Torque Reference Table (%) for OWC002(cont.)** (sTorque\_Limit)

**SGMSH Start Servo Motor Rated Values and Specifications**

| Voltage             |        | 200V  |       |       |       |       |       |
|---------------------|--------|-------|-------|-------|-------|-------|-------|
| Servo Motor: SGMSH- |        | 10A□A | 15A□A | 20A□A | 30A□A | 40A□A | 50A□A |
| Rated Output        | kW     | 1.0   | 1.5   | 2.0   | 3.0   | 4.0   | 5.0   |
| Rated Current       | A(rms) | 5.7   | 9.7   | 12.7  | 18.8  | 25.4  | 28.6  |
| Max. Instantaneous  | A(rms) | 17    | 28.0  | 42    | 56    | 77    | 84    |
| Torque Limit Val    | %      | 298   | 289   | 331   | 298   | 303   | 294   |
| Voltage             |        | 400V  |       |       |       |       |       |
| Servo Motor: SGMSH- |        | 10D□A | 15D□A | 20D□A | 30D□A | 40D□A | 50D□A |
| Rated Output        | kW     | 1.0   | 1.5   | 2.0   | 3.0   | 4.0   | 5.0   |
| Rated Current       | A(rms) | 2.8   | 4.7   | 6.2   | 8.9   | 12.5  | 13.8  |
| Max. Instantaneous  | A(rms) | 8.5   | 14.0  | 19.5  | 28    | 38    | 42    |
| Torque Limit Val    | %      | 304   | 298   | 315   | 315   | 304   | 304   |

**SGMDH Standard Servo Motor Rated Values and Specifications**

| Voltage             |        | 200V    |         |         |
|---------------------|--------|---------|---------|---------|
| Servo Motor: SGMDH- |        | 22A□A□B | 32A□A□B | 40A□A□B |
| Rated Output        | kW     | 2.2     | 3.2     | 4.0     |
| Rated Current       | A(rms) | 15.7    | 20.9    | 23.2    |
| Max. Instantaneous  | A(rms) | 54      | 73.0    | 77      |
| Torque Limit Val    | %      | 344     | 349     | 332     |

**SGMUH Standard Servo Motor Rated Values and Specifications**

| Voltage             |        | 400V  |       |       |       |
|---------------------|--------|-------|-------|-------|-------|
| Servo Motor: SGMUH- |        | 10D□A | 15D□A | 30D□A | 40D□A |
| Rated Output        | kW     | 1.0   | 1.5   | 3.0   | 4.0   |
| Rated Current       | A(rms) | 2.7   | 4.1   | 8.1   | 9.6   |
| Max. Instantaneous  | A(rms) | 8.5   | 14.0  | 28    | 38.5  |
| Torque Limit Val    | %      | 315   | 341   | 346   | 401   |