



# MotorMakers Inc

## Memo

To: Manufacturing Design Teams  
Date: 2008-04-01  
From: Ralph Stirling  
Subject: Brushless motor stator winding machines

### Summary

The 2008 model brushless outrunner motor winding machines must meet specific criteria for parts handling, wire specifications, and operator controls. General instructions for hand winding these stators can be found at [http://www.gobrushless.com/GBL\\_single\\_v2.pdf](http://www.gobrushless.com/GBL_single_v2.pdf)

### Criteria

1. Stators will be GoBrushless 22.7mm 9 pole insulated types with specifications:
  - \* OD: 22.7mm
  - \* ID: 8.0mm
  - \* Thickness: 4.5mm
  - \* Insulation: High-temp heavy epoxy coating
2. Windings can be 5-15 turns per pole of 22 to 26 gauge enameled magnet wire. Mechanical adjustments may be made when changing wire gauge. Number of turns and wire gauge will be stored in parameters in the PLC or actuator controller
3. Stators must be fed into the machine automatically from a tube, tray, or conveyor. Wound stators must be fed out of the machine automatically on a track. You may choose to wind stators with the bearing tube pre-inserted.
4. The machine must be equipped with an emergency stop button that stops all motion and de-energizes all actuators, and a reset button that returns all actuators to initial positions.