

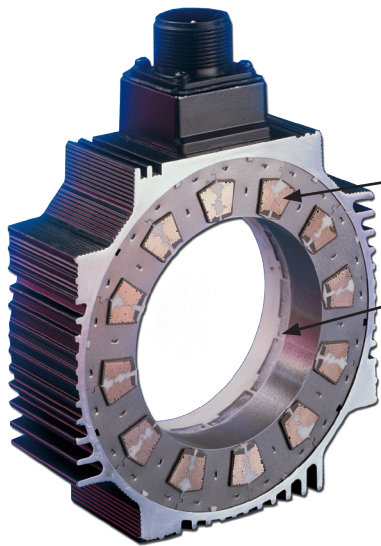
Sigma-5 Servo

Key Advantages



Servo Motor Construction

With the introduction of automated winding techniques and a precisely machined segmented stator design, Yaskawa has been able to lead the market in motor torque density over the past 20 years.



Single piece stator core typically only allows for around 40% fill.

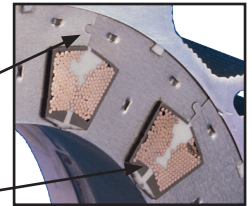
Yaskawa's segmented stator core design allows for more copper to be packed into the gap (70% fill)

The encapsulation of each winding assists with heat dissipation and offers protection from shorting between windings.

Precise machining of the stator bore allows for a smaller air gap between the rotor magnets and stator windings. This results in a higher running torque and a reduced cogging torque

Neodymium-Iron-Boron rotor magnets optimize flux density in the motor

Reductions in the space taken up by winding end turns allow for significant reductions in overall motor length.



Matched Servo Motor/Amp Sets

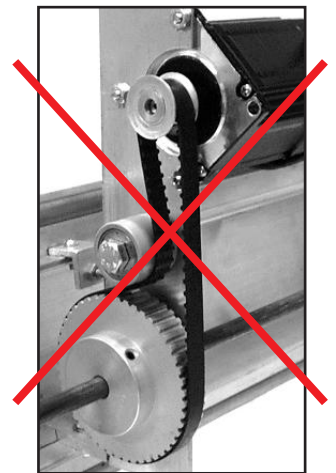


Yaskawa's servo motors and amplifiers are designed and tested jointly with the goal of optimizing the efficiency of the system. Minimize failures caused from:

- Motor Overheating
- Motor Runaway
- Encoder Signal Loss
- System Commissioning Errors
- Untested motor / drive combinations

Simplify Machine Design

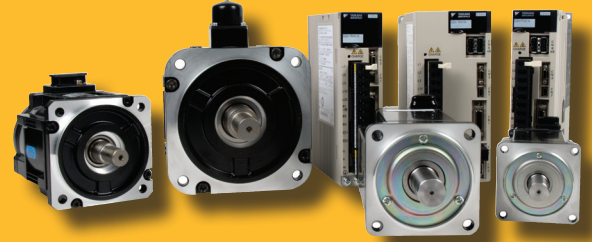
- Design up to 20:1 inertia mismatch
- Reduce or eliminate gearbox
- Reduce maintenance points in machinery



Eliminate geared belts and pulleys

Sigma-5 Servo

Key Advantages



More Connectivity

- Maintain your system with on board utilities with the integrated webservice
- Trend OEE at the SCADA system using the imbedded OPC Server
- Ethernet/IP Command interface and AOI instruction packages available

Easier for you to:

Maintain your System



Web Server

Monitor with SCADA

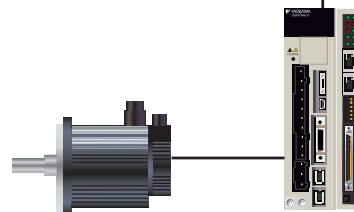


OPC Server

Program your PLC



Add-On Instructions



On-board EtherNet/IP

Unmatched Quality and Reliability 7/100K

Yaskawa constantly tracks and measures product failures in time (FIT). The actual FIT data demonstrates a high quality and reliability rate that is the envy of our Industry. This field data confirms that we do, in fact, exceed our design targets for reliability. Yaskawa's overall FIT is based on the failure reports received from the field for a period of time, monthly (including Warranty and Non-Warranty items)

In a recent internal study of **100,000** servo motors shipped, Yaskawa found that only **7** were returned for warranty repair. To put that in perspective, a typical out-of-box failure rate goal for manufacturers of brushless servo motors is 0.5% (or 500 failures per 100,000 motors shipped).



Deming Medal for Quality in Manufacturing

Yaskawa is the only motion control manufacturer to win the Deming Medal for quality.

Our internal assembly failure rate is 0.01%
(assembly errors found in the actual assembly process)

The field assembly failure rate is 0.0062%
(assembly errors that are found after the product is installed in the field).

