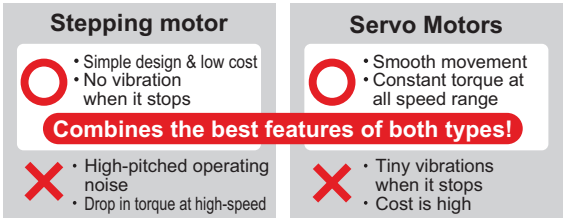
This is why the TRANSERVO is terrific!

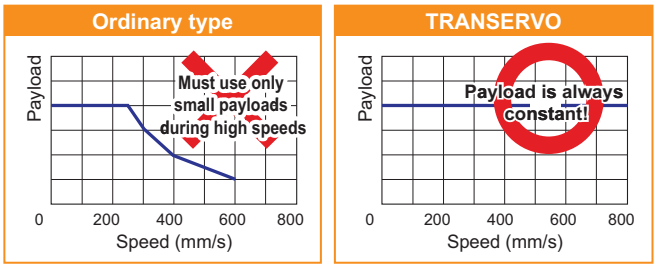
1 New control method combines the best features of servo and stepping motors!

Stepping motors have great features such as a low cost and no tiny vibrations when it stops. Yet they also have drawbacks such as a drastic drop in torque at high speeds and heavy current consumption when it stops.
The TRANSERVO by YAMAHA eliminates all these problems by adopting an innovative vector control method. In effect, the TRANSERVO delivers the same functions and low cost of a servomotor while using a stepping motor.



High-speed operation slashes production time!

The Transervo has a fixed torque regardless of speed and so can swiftly handle even heavy work payloads. Moreover up to now the upstream model had to be selected based on its high-speed zone but one model can now do it all so selecting the machine model is easy.

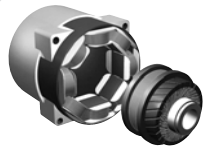


Energy saver! Perfect stop!

Control is basically the same as a servomotor so power consumption is kept to a minimum, which saves energy and helps cut down on CO_2 emissions. Also perfect stop can be achieved as the same as with ordinary stepping motors so choose this setting if needed.

2 Environmentally rugged resolver provides closed loop control

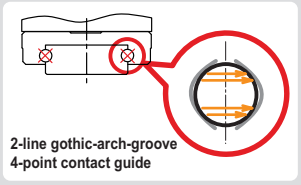
Of course “no step-out”. The resolver used here for detecting the motor position is the same well-known and reliable resolver as used in our high-level robots. It offers stable position detection even in harsh environments containing dust or oil, etc. Moreover, it boasts a high resolving power of 20480 pulses per rotation.


Resolver

The resolver is a magnetic position detector. Its structure is simple with no electronic component and no optical elements. One great feature compared to ordinary optical encoders is that there are very few points where a failure might occur. Vast quantities of resolvers are used in fields like aviation and the automobile industry where reliability is essential and also because they are **highly tough in harsh environments with a low failure rate.**

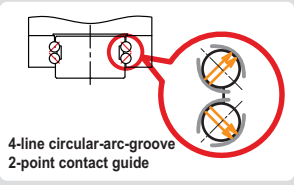
3 Ideal 4-line circular-groove 2-point contact guide gives longen service life

A newly developed module guide is employed, and a 4-line circular-groove 2-point contact guide, which has been used for high-level models, was built into a body that is just as compact as the previous models.
Guide maintains a satisfactory rolling movement with minimal ball differential slip, even if a large momentum load is applied or the installation surface accuracy (flatness) is bad. Rugged design ensures that breakdowns from problems like abnormal wear will seldom occur.



▶ **Ordinary model**

Large differential slip tends to occur when a large momentum load is applied or installation surface accuracy is poor.



▶ **TRANSERVO**

Utilizes a circular-arc-groove 2-point contact guide. Ball differential slip (spin) is minimal.