

## XGT & XGS flexible couplings for servomotors

**High-gain rubber type couplings allow greater servomotor gain, enable reduction of stabilization time and suppress vibrations. That is why XGT & XGS couplings are the perfect match with the latest servomotor technology in demanding performance applications such as semiconductor industry, robotics, automation, medical and precision machinery industries.**

Requirements for higher servomotor specifications and performance continue to evolve and critical aspects such as accuracy and speed become more and more crucial, in particular when it comes to improve efficiency, quality and productivity. Consequently also coupling technology must progress and meet increasing demands. Couplings used in servo systems are often selected due to their static torsional stiffness and backlash-free features that are required by high precision and high speed applications in order to reduce the stabilization time (i.e. the delay between the command and the actual execution, for instance when the motor is commanded to stop and the moment it really comes to a stop). **The higher is the servomotor gain, the lower is the stabilization time. But on the other hand excessive gain increases the occurrence of vibrations (aka "hunting").** Typically users are accustomed to utilizing disc or bellows type couplings to raise the gain, but the use of highly rigid coupling causes hunting, so this solution may not be effective at all.

**XGT & XGS high-gain rubber (HNBR) couplings** have been demonstrated through tests to be the **perfect match with servomotors, stepping motors and actuators** as they can more effectively **reduce the stabilization time and improve servomotor gain, while suppressing hunting.** XGT & XGS flexible couplings have a completely integrated structure (single-piece structure).

The aluminum hubs at both sides are molded with a vibration absorbing rubber that prevents backlash yet remains flexible. In addition the internal claw-like structure lined with rubber allows for optimal torsional rigidity, high torque and vibration damping property. Tests have demonstrated that the use of HNBR is very efficient and that there is no drop in performance due to rubber deterioration. Furthermore the rubber features outstanding thermal, oil and chemical resistance.



**XGT is the standard type model**, its width ranges between 23 mm and 60 mm (0.905" ÷ 2.362") and the bore diameter at hubs is 3 mm to 25 mm (0.118" ÷ 0.984").

**XGS is the short type model** designed for space saving, its width ranges between 18 mm and 40 mm (0.708" ÷ 1.575") and the bore diameter at hubs is 3 mm to 20 mm (0.118" ÷ 0.787"). In both cases different bore diameters at hubs can be ordered.

The allowable operating temperature is between -20°C to +80°C (-4°F +176°F).

Since they are able to optimally meld high torsional rigidity and high level damping properties, XGT & XGS are ideally suited for use with servomotors, stepping motors and actuators, in particular in demanding performance applications (high speed, high accuracy, ...) or in case of need for vibration and noise absorption/suppression such as in semiconductor industry, robotics, automation, medical and precision machinery industries, SMT machines, laser marking devices, index tables, high precision XY stages, CNC image measuring instruments, press brakes, testing and measuring devices.