Media Release
Sneak peek at zero backlash.

Small DC servo motor systems with zero backlash.

Looking back at our press release on the launch of the highly successful GP32BZ, we asked questions about the validity of zero backlash gearhead ratings and explained that zero backlash is only possible with a trade-off of some sort like efficiency or lifespan. For a DC servo motor system to be called a zero backlash servomechanism one must explain the operating principal and its limitations. maxon motor does just this, and you can see that it really depends on your standpoint. The maxon motor BZ gearbox has a final planetary stage where the planet gears are stacked two high held in tension against the sunwheel and ring gear by spring loading them away from one another. This technology will exhibit zero backlash qualities up to the point where the load torque overcomes the pretension spring level. After this point the gearhead will have a backlash level defined by the machining tolerances. So if you are a conservative manufacturer you would hesitate to call this zero backlash because it does not exhibit this quality across the entire potential operating range. By contrast many low cost and sometimes very ambitious companies would not hesitate to market this as a zero backlash gearbox. So call it what you will, maxon motor BZ gearheads are given three torque levels. The first is the torque level up to the pretension level the second is the continuous torque rating and third is peak. In the case of the 32mm gearhead this is up to 1.7Nm where you will have zero backlash, 4.5Nm continuous operating capability and 6.2Nm peak.

Now for the sneak peak. Pictured is the first Australian delivery of a 16mm “zero backlash” maxon planetary gearhead fitted with an equally small DC servo motor and an integrated incremental encoder. Not yet available for production but a strong sign of the exciting things to come.

Length of this press release: 322 words

The media release is available on the internet at: www.maxonmotor.com.au