Testing Without leakage

The Servoseal sealing element from the hydraulic testing actuator manufacturer Herbert Hänchen GmbH & Co. KG features wear-free operation and no energy loss due to leakage.

Conventional testing actuators use hydrostatic bearings and fitted pistons without pressurized seals. In these so-called gap seals, sealing is achieved by a tight gap between the moveable parts. These designs are complex and the throttle gap causes a significant reduction of hydraulic efficiency due to leakages. On the other hand, these seals operate practically frictionless, are suitable for maximum frequencies, accelerations, side loads and speeds up to 4 m/s in stick-slip-free operation as standard features.

For many applications, in particular in the testing sector, Hänchen developed a new sealing system for the piston and optionally also for the piston rod. Thus, the new Servoseal sealing element can be used in the sleek servo actuator series 120 and 300 just as well as in the testing actuator series 320.

YOUR ADVANTAGE
This offers users the possibility to choose a cost-effective and extremely powerful alternative to known actuator brands – for example, the MTS series 244. With these servo actuators you can realize testing tasks with small amplitudes and frequencies up to 25 Hz, low side loads and high accelerations. And all this with all the advantages mentioned: low friction, low wear and no leakage of functional oil as with the gap seals. With this series, upstrokes of up to 1,500 mm and swivelling movements of the actuator are possible.

But in many cases it is also possible to equip the customary hydrostatic testing actuators of the 320 series for highly dynamic movements and high side loads with the Servoseal, e.g. at the piston, and thus achieve better hydraulic efficiency. Additionally, often a smaller control valve may be used, since no functional oil flow is used and there is no leakage of the gap seal with the use of the Servoseal. This safe costs and depending on the application case also increases achievable dynamics.

www.haenchen-hydraulic.com
OEM interview
Engineering chief Albert Biermann explains how he’s shaking up the R&D department at Hyundai-Kia

Pickup truck development
Detroit’s Big Three reveal how they strive to overcome all the headaches associated with engineering their popular off-roaders

The future of engine testing
Will real-world evaluation techniques remain key for next-generation powertrain programs or will virtual tools provide all the answers?

Why autonomous vehicle developers are struggling to log and process test information on a global scale

Will real-world evaluation techniques remain key for next-generation powertrain programs or will virtual tools provide all the answers?