



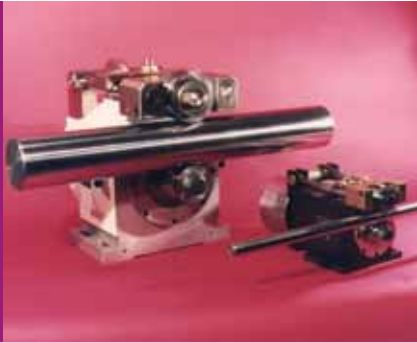
fives cinetic

Cranfield Precision UK



Cranfield Precision
FRICTION DRIVE
Ultra Smooth Linear Motion
Zero Backlash

→ Precision Linear Drive



Cranfield Precision's Friction Drive Range - linear drive systems for ultra smooth backlash free linear motion.

Cranfield Precision has developed a range of friction drive units which is totally backlash free offering higher levels of accuracy than conventional linear drive systems.

The friction drive unit's main advantage is in the positioning accuracy, which is not affected by backlash as found in conventional ballscrews or rack and pinion systems.

Backlash is pure time delay in a mechanical system and combined with mechanical resonances, restricts the ability to extend the position loop bandwidth.

Accuracy with the friction drive is such that it can fully exploit the finest resolution attainable from position sensors, such as laser interferometers to less than 2.5 nm

Friction drive units are most suited to applications that require extremely precise motion and repeatability.

Typical applications are scanning machines, precision feed drives (for turning and grinding machines) and high accuracy co-ordinate measuring machines

Friction drive units can be built to suit various applications with varying requirements. The profile and size of the "drive bar" and "drive roller" can give different characteristics for traction, acceleration and velocity. Cranfield precision has applied friction drives on small in-feed carriages to large 26 tonne bridges used on grinding machines.



Friction Drives Used on the NANOCENTRE



26 Tonne Bridge Driven by Friction Drives

