

APPLICATION BULLETIN

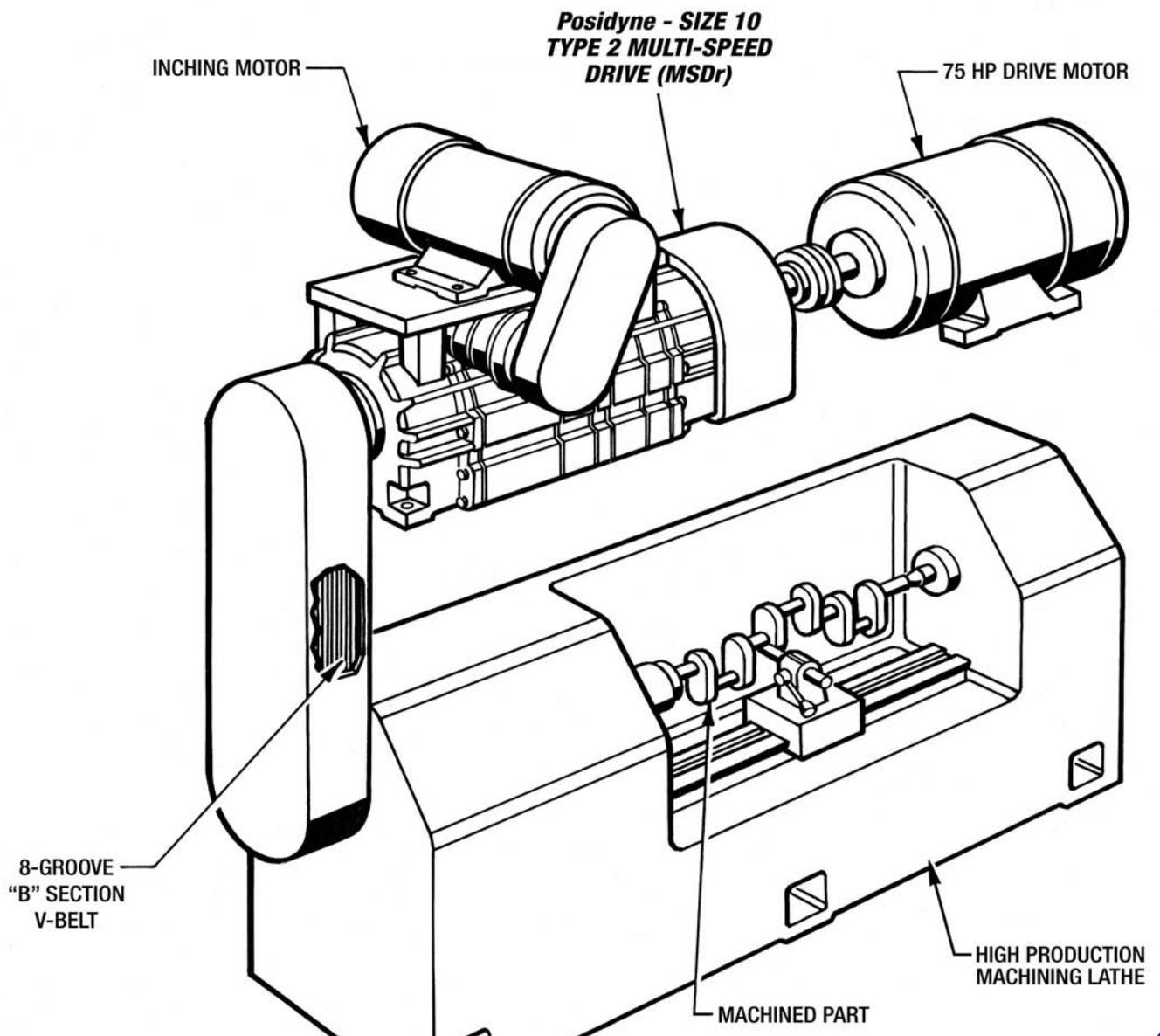


APPLICATION: Lathe Positioning Drive

INDUSTRY: Automotive, Truck and Tractor Mfg. Plants

PRODUCT: Multi-Speed Drive (MSDr)

LATHE POSITIONING DRIVE



LATHE POSITIONING DRIVE

WHERE THEY ARE USED: High production machining lathes in automotive, truck and tractor engine and transmission plants, small engines, marine engine and transmissions.

HOW THEY WORK: To start the operation the chuck must be positioned precisely to receive the part to be machined. The part is loaded, chucked up, and the high-speed clutch of a Multi-Speed MSDr is engaged accelerating the part and chuck up to full speed. At this time the tooling is brought in and the machining is begun. At full depth the tools are retracted and the secondary, or low speed clutch of the MSDr is engaged to dynamically decelerate the part and chuck to the low speed. The low speed is used to inch the chuck into home position at which time the spring set brake is engaged to accurately stop the chuck at the home position. The brake holds the chuck while the machined part is being removed and another loaded.

PROBLEMS SOLVED:

- 1. INCREASED PRODUCTIVITY** - The consistent stopping accuracy of the **Oil Shear** technology enable the MSDr to reduce cycle time and increase productivity. A recent study of one of the Big Three automakers showed a savings of 13 seconds per machine. A second study of another Big Three automotive plant showed a savings of 6 seconds per machine cycle.
- 2. LONG SERVICE LIFE** - The inherently lubricated, totally enclosed design greatly reduced frequent failures causing expensive down time.
- 3. POSITIONING ACCURACY** - The repeatability and dependability of the MSDr eliminated costly "crashes".

IMPORTANT FEATURES:

- Lubricated and cooled friction surfaces provide long service life.
- Advanced friction materials ensure consistent and accurate repeatable positioning.
- **Oil Shear** technology produces high thermal capabilities to enable the Multi-Speed drive to withstand today's high production rates.
- Spring-set brake provides very quick stopping in a "panic" or emergency stop.
- Secondary clutch also provides inching capabilities for "set-up" of the machine.



FORCE CONTROL INDUSTRIES, INC.

3660 Dixie Highway Fairfield, Ohio 45014

Phone: 513-868-0900 Fax: 513-868-2105

E-Mail: info@forcecontrol.com Web: www.forcecontrol.com