POLYCLUTCH\textsuperscript{®} SLIP CLUTCH OVERVIEW

POLYCLUTCH ELIMINATES STICTION

Dynatect’s clutches are manufactured utilizing a proprietary technique resulting in accurate and repeatable torque, smooth breakaway, and continuous slip durability. Stiction is the static friction that needs to be overcome to enable relative motion of stationary objects in contact. The elimination of static friction or "stiction" is a result of breakaway torque that is less than running torque, providing predictable performance and characteristics. Dynatect’s burn-in process ensures that all Polyclutch\textsuperscript{®} slip clutches perform consistently right out of the box, with no break-in period required.

Key Benefits
- Smooth breakaway and continuous slip
- Accurate, repeatable cushioned torque
- Long life of 20-30 million cycles in slip condition
- Torque range from 0.5 lb-in to 1000 lb-in
- Fixed, adjustable and custom designs
- Clutches are bi-directional
- No break-in period required
- No lubrication needed

Limitations
- Maximum 1.25 inch shaft size
- Not to be used as a universal joint or a spring coupler
- Does not de-couple at overload
- Cannot be exposed to radiation
- If slip clutch would be directly exposed to weather or wash down, contact Dynatect to discuss

A Great Alternative To...
- Servo-motors: our solution costs less
- Magnetic clutches: smaller, less expensive
- Ball detent: no clicking, no reset required
- Torque limiters: consistent repeatability, continuous slip
- Electronic protection only: added mechanical safety in electronically controlled systems

DESIGN FUNCTIONS AND APPLICATIONS

Polyclutch slip clutches can slip continuously or intermittently for 20 to 30 million cycles. This opens up many design engineering options including…

Overload Protection
Protect machinery and operator. Clutch will slip when mechanism is jammed. Motion will continue when impediment is removed.

Soft Starts/ Cushioned Stops
Inertia makes clutch slip when starting and/or stopping. Results in less shock throughout the system. Ideal for slip at the end of stroke. No sudden shock on sensitive paper, film, wire, thread, etc.

Positioning Hinge
Hold lid or cover at any position. Fingertip control. Combine with one way clutch for free movement in one direction. Ideal for hinges when requiring smooth movement of lids, covers, doors, screens, medical equipment, light fixtures, etc.

Tension Control
Maintain constant tension while winding or unwinding wire, paper, film, thread, etc. Slip clutch automatically compensates for changes in speed and diameter. Pneumatic clutch can change tension during operation. Smooth, accurate starting/stopping of conveyors, indexing mechanisms, linear actuators, take-up reels, printers, etc.

Torque Control
Screw bottle caps, screws, controls, etc., to correct torque setting. Combine with one way clutch to slip at rated torque in one direction and freewheel or positive drive in other direction. Repeatable, accurate torque for capping machines, fastener driving, valve control, etc.

Force Control
Push product against gate with constant force. Remove gate and move to next position. No damage to product or conveyor – clutch does all the slipping. Also used for overload protection when jammed and for indexing the conveyor.

Polyclutch\textsuperscript{®} is made in the USA