

OVERLOAD SAFEGUARD



Hilliard Ball Detent Overload
Release Clutches For Precise
Torque Management



Hilliard



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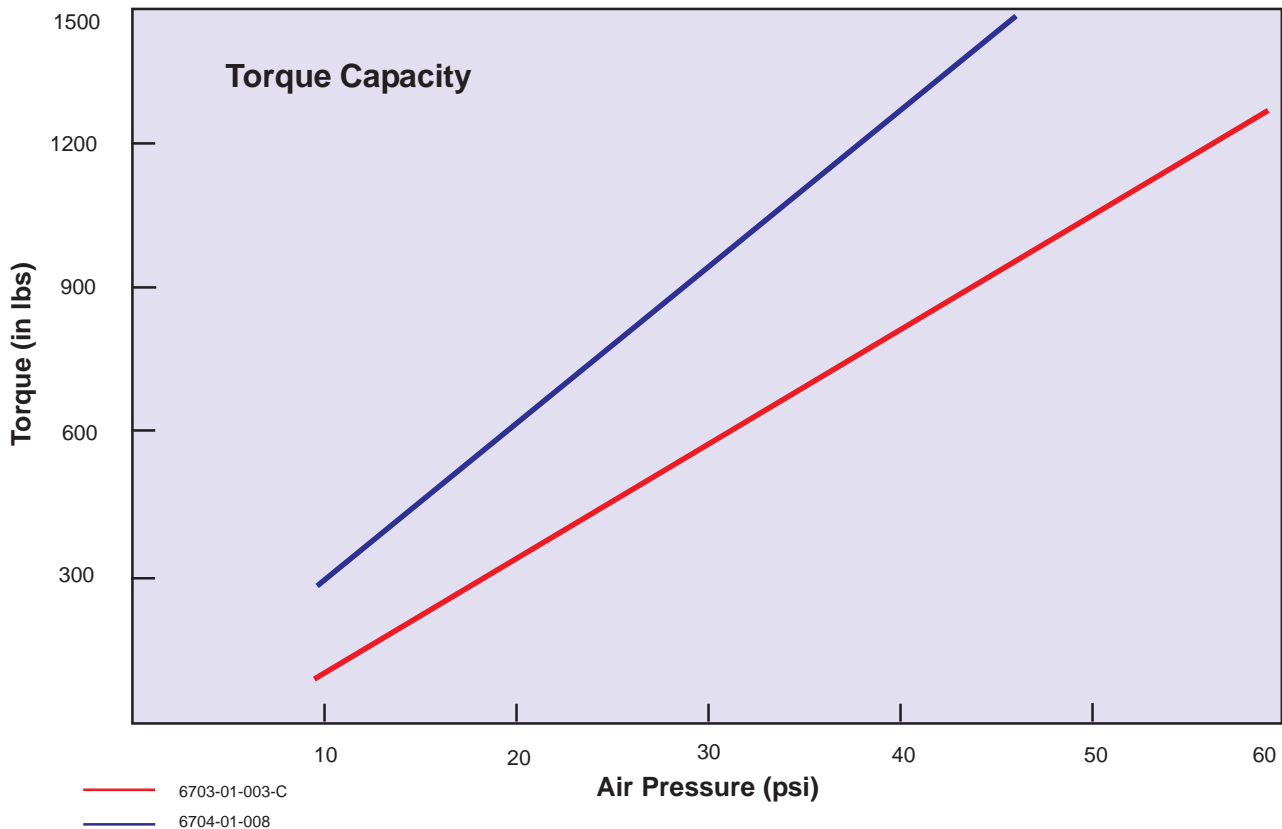
Pneumatic Overload Release Clutch

The Hilliard pneumatic Overload Release Clutch provides adjustable on-the-fly overload protection by using air pressure to regulate torque. Air pressure puts force on the balls placed inside the pockets in the clutch, and provides the means for torque transmission. By adjusting the air pressure, the overload torque can be increased or decreased accordingly. (See graph for details.)

During an overload, torque increases, which forces the balls out of their pockets. When the balls come out of their pockets during an overload, a detector plate automatically moves which triggers a limit switch to de-energize a solenoid valve, removing the air pressure from the unit. The clutch releases but the line shaft can continue to operate.



Pneumatic Clutch Cutaway

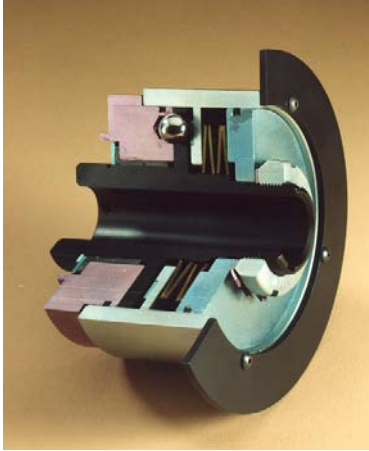


Hilliard Overload Release Clutches are designed to provide accurate overload protection and automatically reset after the overload is cleared. An additional safety feature is provided through the function of the limit switch.

The ball pocket design ensures that the torque setting remains consistent over time. The clutches can transmit torque equally in both directions, while also allowing the flexibility to reverse the direction of operation. The units can be driven from the input sleeve, and transmit torque to a through shaft, as well as transmitting torque from the shaft to the sleeve. No matter which way the clutches are being driven, they will hold up in most environments, including wash-downs. Made of high-grade stainless steel and plated carbon steel, they are approved for use in the food industry.



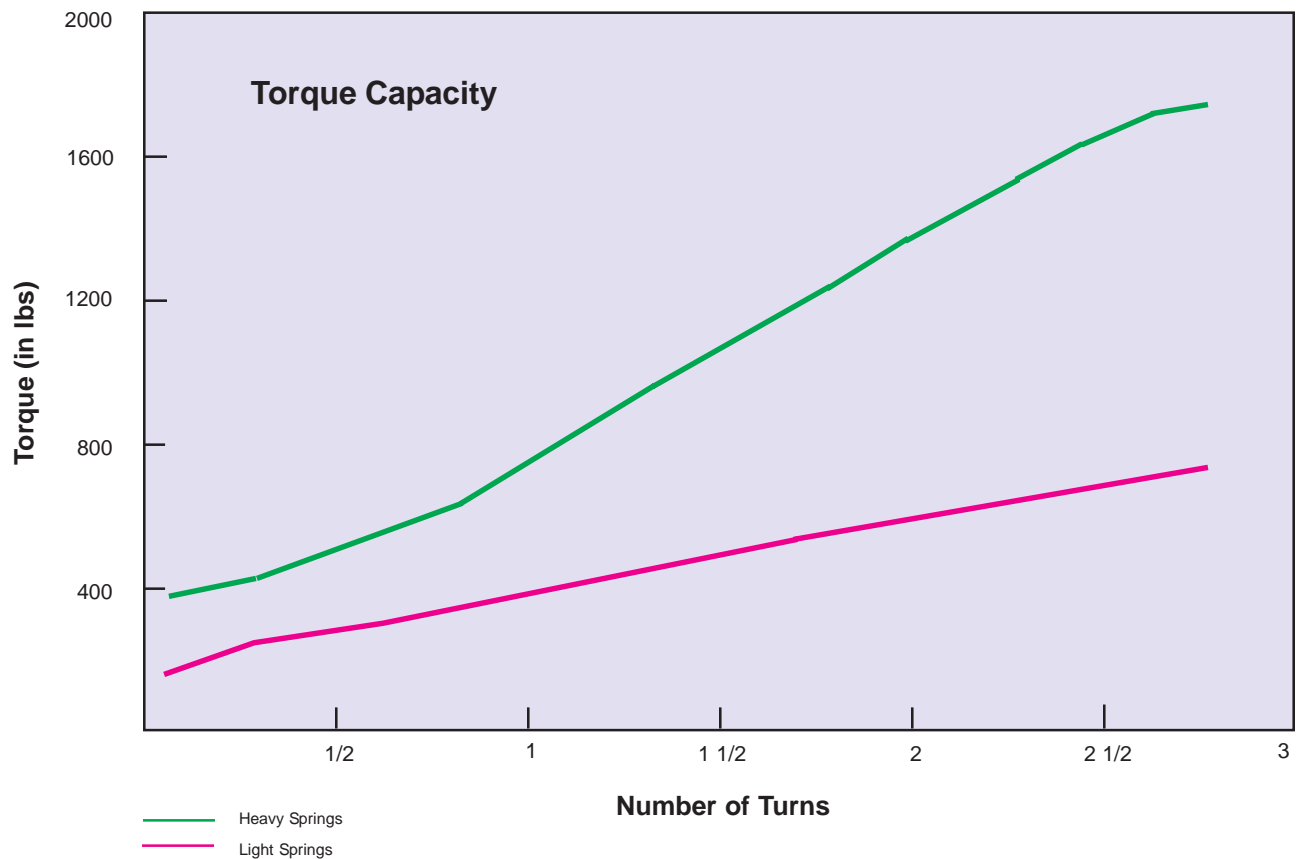
Mechanical Overload Release Clutch



Mechanical Clutch Cutaway

The Hilliard mechanical Overload Release Clutch provides adjustable overload protection by compressing a spring pack to regulate torque. Springs put force on the balls placed inside the pockets in the clutch, and provide the means for torque transmission. By adjusting the compression in the spring, the overload torque can be increased or decreased accordingly. (See graph for details.)

During an overload, torque increases, which forces the balls out of their pockets. Torque can no longer be transmitted through the unit. When the balls come out of their pockets during an overload, a detector plate automatically moves to trigger a limit switch that electronically shuts down the equipment.



Applications

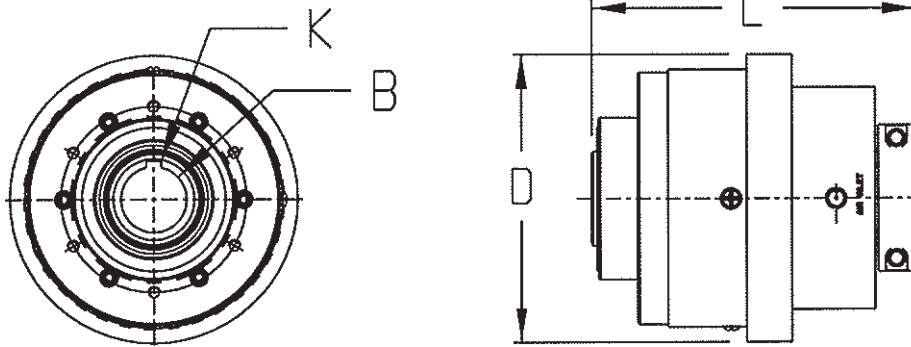
- Automatic lamination cutter
- Conveyor
- Paper and packaging equipment
- Printing
- Material handling
- Food processing

Benefits

- Bi-directional operation
- Single-position indexing
- Precise disconnects
- Stainless steel units are washdown duty for food service



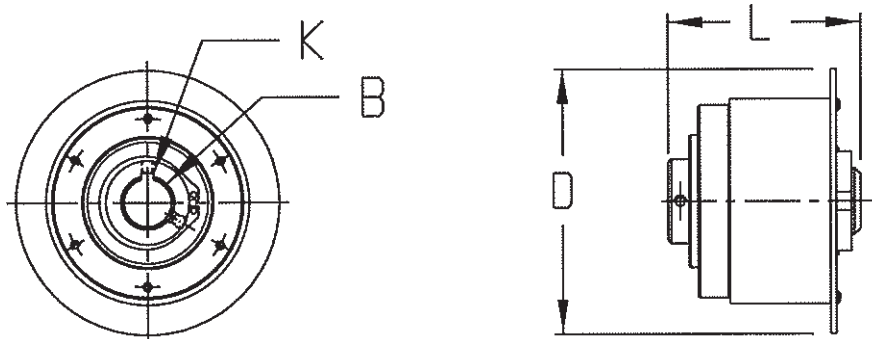
Pneumatic



Part Number	(K) Keyway	(B) Bore	(L) Overall Length	(D) Diameter
6704-01-008	5/16	1-3/8	6-3/4	6
6703-01-003-C	1/4	1-1/8	5-9/16	4-3/4

dimensions in inches

Mechanical



Part Number	(K) Keyway	(B) Bore	(L) Overall Length	(D) Diameter
6702-01-003-C (specify heavy or light spring)	3/16	3/4	4	5-1/2
	1/4	1	4	5-1/2

dimensions in inches