



## Why Use a Torque Limiter?

[Centric Overload Clutches](#) and [Torq/Gard Clutches](#) provide machine protection and reduced repair time during jamming load conditions. Mechanical or Pneumatic torque limiters provide consistent torque levels after many overloads. Unlike friction style or shear pin type torque limiters, [Centric Clutches](#) and [Torq/Gard Clutches](#) can provide an accurate method of resetting the torque with no operator intervention. A single position clutch will reengage in the exact rotational position each time. This is often necessary for system timing in bottling, packaging, and paper converting type applications.

Rotating systems can have enough rotating energy (inertia) to cause significant machine damage during a jam-up or system crash. This inertia varies based on the RPM and rotating mass for each application. A high mass slow speed (RPM) could do more damage than a high speed application during a crash. A torque limiter is basically a mechanical fuse used to shut down the machine and allow the rotating energy to dissipate without causing excessive damage.

At very low speeds systems can develop a huge amount of unnecessary torque. This torque can damage drive system components (Shafts, Gearboxes, Chain, Couplings...) in the advent of a jam. A torque limiter will limit the torque to the set level and extend system component life.

Ideally the torque limiter should be placed as close as possible to the source of the jam. This will allow the system inertia and torque to be quickly and effectively disconnected from the jammed section. The system can then be allowed to coast to a stop without causing further machine damage. A mechanical torque limiter will provide faster response times and better protection than typical electronic methods at high crash rates.