

Drive Overload

[Print](#)

[\(10\)](#) » [Heater Replacement](#) » [Screw Tip to Screen Changer](#) » **[Drive Overload](#)**

Drive overload

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When an extrusion line is used to run much higher viscosity resins than it was designed to run, the drive can be over loaded from excessive torque created by the higher shear stress on the screw. Several modifications to the system will correct the drive overload:

1. A larger drive motor
2. A shallower screw
3. Re-timing the drive system by changing the belt and sheave or gearbox ratio

The latter is preferable. especially if there are belts and sheaves, and as long as the gearbox is strong enough to run at higher torque and shaft overhung load. All of these engineering numbers can be calculated.

If the reduced top speed from the re timing procedure interferes with required output of the lower viscosity polymer, field regulation can be added to the drive to keep the higher torque capability and allow higher top speed.

- Rick Knittel

See also:

- [Calculating DC drive power](#)
- [DC motor maintenance](#)
- [Extruder drives](#)
- [The extruder drive](#)

Return to [Consultants' Corner](#)