

# How to stop teeth in your plastic gears from breaking



1. **Understand the loads on the gear** – our free Gear Card summarizes the load data
2. **Select the right plastic** – it should be tension-free, dimensionally stable (especially in moisture), display high impact strength, and offer secure attachment to shaft.
3. **Size the gear** – We use proprietary software to correctly size the gear for the load.
4. **Design tooth mesh to minimize tooth wear** – this may involve optimizing tooth size, modifying teeth, or application of a special low-friction coating.
5. **Examine the drive layout** – sometimes a slight change in the drive design (e.g., a larger gear OD) will prevent the gear from breaking.
6. **Minimize backlash** – excessive backlash caused by an undercut to compensate for moisture absorption can increase shock loading and shorten gear life.

For your FREE Gear Card  
Call 201-767-8066

Or visit  
[www.intechpower.com/Gear-Card.html](http://www.intechpower.com/Gear-Card.html)

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**INTECH**  
**Power-Core®**  
Innovation with future™

# Only Power-Core “plastic-on-metal” gears give you all these advantages!

- No lubrication – no product contamination, no maintenance required.
- No moisture absorption – eliminates the need for backlash allowance to compensate for swelling.
- Steel, stainless steel, or aluminum core – dissipates stresses and heat; reduces thermal expansion.
- Engineered for longer life – proprietary formula accurately calculates how long the gear will last.
- Design assistance – Intech engineers can help you size the gear to last in your application. Just fill in and return the free Gear Card available below.

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