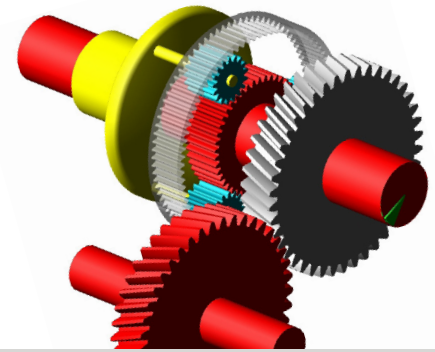


Adams/Gear Generator Toolkit

Create and simulate different types and levels of gears in the Adams environment



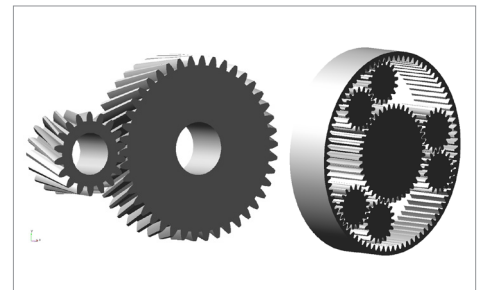
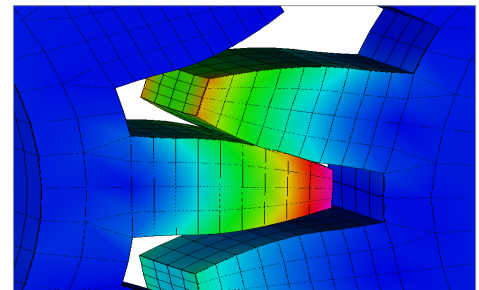
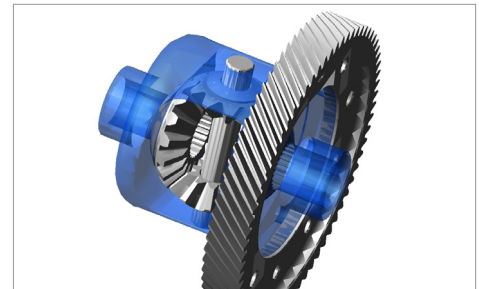
Overview

The Adams/Gear Generator Toolkit is a plugin for Adams developed in co-operation with end users. Adams/Gear Generator allows the user to create and simulate different types and levels of gears in the Adams environment.

Gear Generator can be used to analyze all kinds of applications where gears are included like passenger car gearboxes (manual/automatic), heavy vehicle gearboxes, windturbine transmissions, differentials, gear components in office utilities etc. The most common use is for load investigation in gears, shafts and bearings but also investigation of gear rattle phenomena and general system behaviour due to lash, variation of stiffness and losses in gears are common areas of use. With Adams/Gear Generator a complete gearbox with detailed tooth contact can be modelled easily without expert knowledge in Adams.

Some of the Adams/Gear Generator features are:

- Graphical user interface for creation of involute gears
- Installed as a regular Adams plugin to Adams/View
- Automatic installation
- Detailed gear geometry creation enables user to achieve mass properties for the gear parts automatically
- Friction included in tooth contact (except 'Simplified' gear)
- 100% dynamic (force based) gear representation
- Spur gears & Helical gears (internal & external)
- Spiral and Straight Bevel gears
- Demo tool to get started included
- Tool to create a complete planetary gear set included
- Online documentation
- Supports all Adams modelling Units
- Several Modelling options:
 - Enhanced Simplified Gears (Helical/Spur gears & Straight/Spiral Bevel gears)
 - › Analytical contact calculation (fast)
 - › Initial backlash as input value (design variable) for rattle investigations etc
 - Detailed Spur Gears
 - › Analytical contact calculation (fast)
 - › "True" backlash based on actual working centre distance and tooth thickness
 - › Capture the effect of variation of loading between 1-3 teeth (noise generator)
 - Detailed 3D-contact based Gears (Helical/Spur gears & Straight/Spiral Bevel gears)
 - › Geometry based contact (extremely fast shell to shell contact)
 - › Gears can have all 6 Degrees Of Freedom
 - › "True" backlash based on actual working centre distance and tooth thickness
 - › Possibility to explicitly set backlash for 3D contact based gears
- **NEW!** Flexible Gears (automatic conversion from rigid gears to flexible representation in Adams)
- **NEW!** Generation of Nastran Input File



**Adams Gear Generator Toolkit is developed and sold on a consulting basis and is not an official MSC.Software product. For more information about Adams Gear Generator Toolkit, contact your local MSC.Software office, Adams distributor or MSC.Software Sweden.*

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