

STANDARD Model

Standard Model Mechanical System



1. Description
The Standard Model Mechanical System is a...
2. Components
The system consists of the following components:
- Inertia
- Damping
- Spring
- Input force
3. Equations of Motion
The equations of motion for the system are:
$$J \ddot{\theta} + b \dot{\theta} + k \theta = T$$

where J is the moment of inertia, b is the damping coefficient, k is the spring constant, θ is the angular displacement, and T is the input torque.

4. Parameters
The parameters of the system are:
- J : Moment of Inertia
- b : Damping Coefficient
- k : Spring Constant
- T : Input Torque
5. Transfer Function
The transfer function of the system is:
$$\frac{\Theta(s)}{T(s)} = \frac{1}{Js^2 + bs + k}$$

