

Machine Dynamics - Assignment 3

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Q1

Determine L and R according to the required stroke.

$$\begin{cases} L + R - (L - R) &= 76\text{mm} \\ \frac{L}{R} &= 3.5 \end{cases}$$

Obtains:

$$\begin{cases} R &= 38\text{mm} \\ L &= 133\text{mm} \end{cases}$$

Q2

Consider the gas force only, determine the corresponding shaking force, the shaking moment based on the point O , and the output torque T_2 .

Q3

Consider the inertial force only, determine the corresponding shaking force, the shaking moment based on the point O , and the output torque T_2 .