Viscous Damper for Base Isolation and Response Control Systems

FUJITA — Daiwa House Group ®

Mechanism and Features

➢ Damping force is caused by resistance of piston head moving in viscous material.

➢ Damping force (F) is proportional to the α−th power of velocity (V).

➢ The influence of temperature and cyclic loading on the damping performance are small.
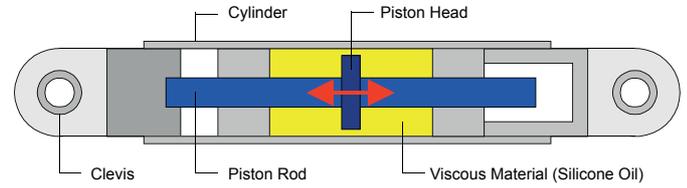
Mechanism of viscous damper

Damper for Base Isolation System

Has received accreditation from the Minister of Land, Infrastructure and Transport.

Accreditation products

Type	Maximum damping force (kN)	Limit velocity (m/s)	Limit displacement (mm)
EAE-500-500	450	1.0	±500
EAE-1000-500	900	1.0	±500
EAE-500-600	450	1.0	±600
EAE-1000-600	900	1.0	±600
EAE-1600-600	1440	1.0	±600
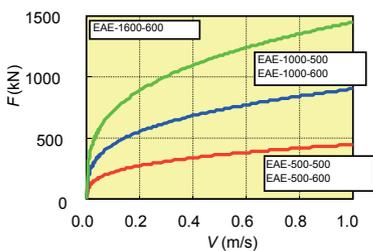
Damping force vs. velocity relationships
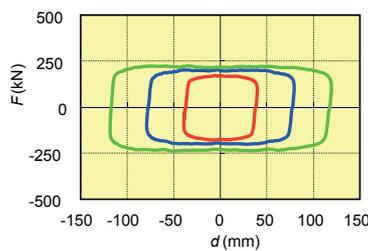
Damping force vs. displacement relationships

Damper for Response Control System

Damping force and α can be arbitrarily set from 50 to 1000 and from 0.1 to 1.0.

Installation situation

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Application

2 base isolated buildings (Hospital and Office), 1 response controlled building (Educational institution)

FUJITA CORPORATION