

VIBRATION PROTECTION SYSTEM (VPS) OF VEHICLE DRIVER SEAT

Areas of Application

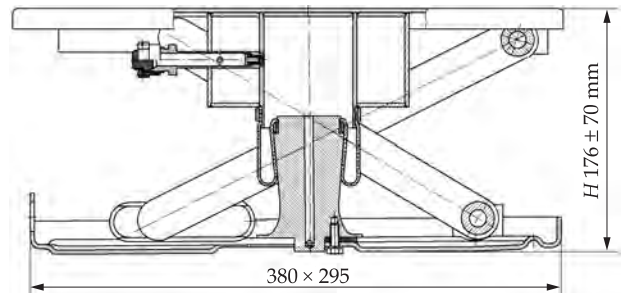
Protecting the vehicle driver
from shock and vibration loads while driving

Specification

This multipurpose vibration protection system has a quasi-zero rigidity in the effective range of static curve and a progressively increasing rigidity during compression and rebound. The perturbation frequency at which the seat VPS protects the driver from shock and vibration loads varies from 0.50 to 80 Hz. Its dimensions (176 × 380 × 295 mm) enable to install it in confined space of vehicles



Driver seat with vibration system installed



General configuration of driver seat
with vibration system installed

Advantages

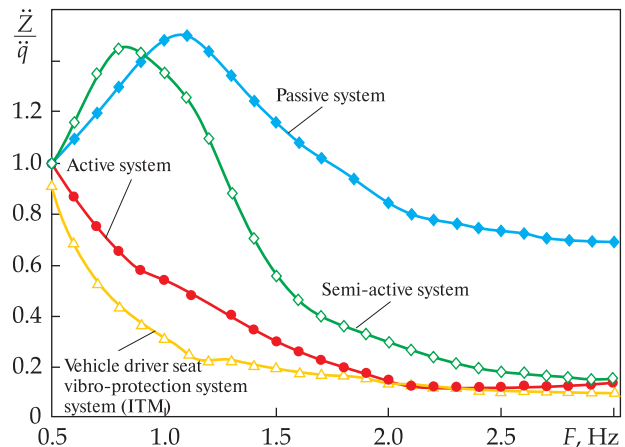
Passive vibration protection system;
no independent shock absorbers;
no air preconditioning system.
The dynamic characteristics match and,
in some cases, surpass those of world
passive, semi-active, and active vibration
protection systems

Stage of Development. Suggestions for Commercialization

IRL7, TRL4
Customized manufacture; seeking partners
for mass production

IPR Protection

IPR3, IPR4



Dynamic parameters of VPS for vehicle driver seat
as compared with those of the best world passive,
semi-active, and active counterpart systems.

\ddot{z} – vibration acceleration transmitted to driver,
 \ddot{q} – perturbing vibration acceleration

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