Instructions for Choice and Use of Rubber Vibration Damper

**Features**

These dampers will abate the noise or protect the perimeter machines from vibration. And increase service life of the machinery equipment.

**Technical Information**

- Working temperature: -40 to 80°C
- The max. load for horizontal use must be considered as the 30% of the max. load for vertical use.

**Notes**

- It is not recommended to use these dampers in environments where sunlight, humidity, acids or chemical agents are present.
- Ensure that the deflection of each mounted dampers are even.
- These dampers must not be used for tensil direction.
- The white powdery blooming on the surface of the rubber is normanl and does not affect function or quality of these dampers.
- The rate of deterioration of rubber vibration dampers depends on usage environments or conditions.
- Ensure to check the following points regurally.
  - Appearance (cracks or flakings)
  - Rubber elasticity

**Determining Rubber Vibration Damper**

1. From the below graph, obtain the deflection value from an intersection of the machine frequency (Hz = r.p.m./60) and the vibration absorption ratio.
2. Divide the load on each damper by the deflection value to calculate the required spring constant (N/㎜).
3. Choose a proper damper whose spring constant calculated is closest to that of listed in the table on each catalog page.

**Choice of Proper Rubber Vibration Damper**

**Usage conditions**

- Frequency of machine: 50Hz (3,000 r.p.m.)
- Load applied on each rubber vibration damper: 120N
- Required rate of vibration absorption: 90%
- Demanding type of rubber vibration damper = VD1

**Steps for Determining Rubber Vibration Damper**

1. In the graph, an intersection of the machine frequency 50Hz and the vibration absorption ratio 90% indicates the deflection value of 1.0mm.
2. Derive the required spring constant by dividing the load on each damper by the deflection value.
   \[ \frac{120}{1.0} = 120 \text{N/㎜} \]
3. Check the spring constant in table on each catalog page and choose the damper whose spring constant is closest to the calculated value 120N/㎜. The demanding type VD1 as in the usage condition determines the proper damper is VD1-2520M6.

**Diagram**

- Graph showing the relationship between frequency of machine (Hz), number of revolutions (r.p.m.), and vibration absorption ratio (%). The resonance range is indicated.
- A red dot at 50Hz and 90% indicates the deflection value of 1.0mm.
- A calculation example: \[ \frac{120}{1.0} = 120 \text{N/㎜} \]
- The proper damper is determined as VD1-2520M6 based on the calculated spring constant.