ALL METAL isolator

Description

All metal isolator of the double-action type, designed for loading in tension and compression.
Housing and other parts in steel. Protection: paint.
Weights:
- V403: 2.7 kg
- V404: 3.0 kg
- V405: 5.0 kg
- V406: 5.8 kg.

Characteristics

A series of low-frequency isolators operating in both tension and compression.
Natural frequency: 3.5 to 5 Hz.
Amplification factor: < 8.
Temperature range: -90 °C to +300 °C.
Maximum load corresponding to a continuous acceleration of 3 g.

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Load range in daN (≈kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Static</td>
</tr>
<tr>
<td>V403</td>
<td>60 - 120</td>
</tr>
<tr>
<td>V404</td>
<td>100 - 200</td>
</tr>
<tr>
<td>V405</td>
<td>160 - 320</td>
</tr>
<tr>
<td>V406</td>
<td>270 - 500</td>
</tr>
</tbody>
</table>

Applications

Isolation of exhaust systems, especially on ships.
Isolation of various pipes (pressurised air or fluids).
Protection of fragile equipment during transportation.

Installation

Attachment points to be made as shown in the cross-section a-a. The mount may then be easily hooked onto the bracket without removing the nuts. The distance between the cups can be adjusted by turning the sleeve and locking the nut. The isolator must not be tensioned. Dimension “h” must be checked after thermal expansion of the pipe and the locknut locked afterwards. Dimension “h” must be within the ± 3 mm tolerances.
V403 - V406

Selection of the mount
The mount type is determined according to the weight of the suspended section. When the mounts are installed at angle $\alpha^\circ$, use the table to estimate the load.

Choice of mounting
This series of isolators should be used for resilient stabilisation of vertical pipes. The mount is not intended to carry static loads. The isolators should be located at an angle of 90° to one another (see figure) in order to distribute the stabilising force in all directions.

Expansion compensation
The ball-joints enable a radial movement of ± 40 mm. For extra precaution, the attachment brackets should be mounted at a 35-40 mm distance between one another (observe carefully the direction of thermal expansion).

Attachment
The attachment bracket requires an open slot to enable easy location of the mount. For best result, the isolators should be located near the support mounting surface when the mounting points are not located near the manifold.

Note
For the suspension of horizontal pipeworks, refer to data sheets for VT4524-XX (single action telescopic mounts).

<table>
<thead>
<tr>
<th>$\alpha^\circ$</th>
<th>100</th>
<th>90</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>$F_d$</td>
<td>0.8$R_v$</td>
<td>0.7$R_v$</td>
<td>0.6$R_v$</td>
</tr>
</tbody>
</table>

$F_d$ = Isolator load
$R_v$ = Weight of section