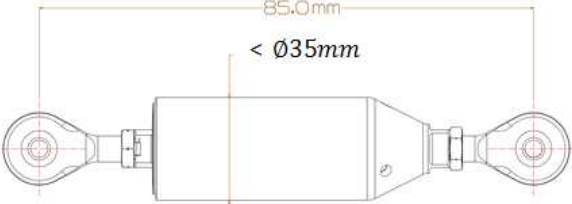


# Specifications

<b>Title</b>	Procurement of Elastomeric Lead-lag Dampers of Small Scale Rotor Hub for Rotor Wind Tunnel Test									
<b>Model</b>	Elastomeric lead-lag damper									
<b>Specification</b>	<p><b>(1) Configuration</b></p> <ul style="list-style-type: none"> <li>- Damper length between two rod end bearings is 85mm.</li> <li>- The diameter or width of damper is less than 35mm.</li> </ul> <div style="text-align: center;">  </div> <p><b>(2) Damper loads</b></p> <ul style="list-style-type: none"> <li>- Damper should withstand the maximum tension load of 600N and the maximum compression load of 900N.</li> </ul> <p><b>(3) Stiffness and damping</b></p> <ul style="list-style-type: none"> <li>- Elastomeric dampers have the characteristics of elastic and damping and complex stiffness is expressed as follows</li> </ul> $K^* = K' + j \times K''$ <ul style="list-style-type: none"> <li>- Target stiffness and damping values of a damper</li> </ul> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Frequency</th> <th><math>K'</math> (N/mm)</th> <th><math>K''</math>(N/mm)</th> </tr> </thead> <tbody> <tr> <td>14.4 Hz(0.5/rev)</td> <td>239</td> <td>67</td> </tr> <tr> <td>28.7 Hz(1/rev)</td> <td>327</td> <td>100</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>- Primary operating frequency for damper design is 1/rev and damper should be designed to match the target values of stiffness and damping at 1/rev requirements within 20% tolerance.</li> </ul> <p><b>(4) Test</b></p> <ul style="list-style-type: none"> <li>- Acceptance test reports for dampers should be provided.</li> </ul>	Frequency	$K'$ (N/mm)	$K''$ (N/mm)	14.4 Hz(0.5/rev)	239	67	28.7 Hz(1/rev)	327	100
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Date : 2017. 3. 27.