Door Closing Force Pressometer

The Pressometer is designed to measure the closing forces of powered doors on passenger carrying vehicles. The unit provides a straightforward pass or fail indication of the measured force according to the measurement guidelines and force limits set out in revision 3 of the United Nations 1958 Agreement, Addendum 106, Regulation 107.

The Pressometer is intended for use by bus manufacturers and also finds application in maintenance workshops and test stations. The unit is of robust construction and has overload protection for the force measuring load cell, making it fit for shop floor use.

The body of the Pressometer is provided with a resilient coating and the parts that contact the door are sleeved with nylon in order to minimise the risk of marking the vehicle on test. For convenience in use the unit is powered by rechargeable batteries and may also be operated while the unit is charging from the provided mains adapter.

When equipped with an optional reaction device the Pressometer may also be used to check the force exerted by a power operated wheelchair access ramp.

<table>
<thead>
<tr>
<th>Technical Data</th>
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<tbody>
<tr>
<td>Force measuring range</td>
<td>0 to 300N</td>
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<tr>
<td>Measuring head compliance</td>
<td>0.1mm/N</td>
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<tr>
<td>Force signal filtering</td>
<td>6dB/Octave roll off above 100Hz</td>
</tr>
<tr>
<td>Test trigger level</td>
<td>50 Newtons</td>
</tr>
<tr>
<td>Mean force fail level</td>
<td>150 Newtons</td>
</tr>
<tr>
<td>Peak Force fail level</td>
<td>300 Newtons</td>
</tr>
<tr>
<td>Batteries</td>
<td>6x AA NiMH</td>
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Case Study
Automotive
English

Door Closing Force
Pressometer

Wheelchair Ramp
This picture shows a Pressometer mounted on a ramp reaction device, ready to measure the forces exerted by a powered wheelchair ramp.

Interior of a Pressometer
The moving bobbin is carried on two ground rods running in linear ball bushings to ensure low friction movement. Springs provide the system compliance specified in the UN standard. A microprocessor monitors the force received throughout a test and evaluates the peak and mean values.

The Pressometer has two fixed bobbins which are held against the door frame of the vehicle to be tested. The unit is positioned so that the door closes against the third, moving, bobbin. If needed an extension bobbin may be attached to the Pressometer so that the unit may be used on vehicles with recessed doors.

The rear face of the Pressometer has two fixed bobbins which are held against the door frame of the vehicle to be tested. After a test the display shows the peak and mean forces that were measured. The LCD display is backlit for ease of use regardless of the ambient light. Separate red and green LEDs provide an indication of the test result.

The Pressometer has a large clear LCD display which indicates when the unit is ready to run a test. After a test the display shows the peak and mean forces that were measured. The LCD display is backlit for ease of use regardless of the ambient light. Separate red and green LEDs provide an indication of the test result.

A Pressometer in use on a coach door

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