TECHNICAL CATELOGUE
BELL PROVER SYSTEM
FOR DOMESTIC LPG GAS METER CALIBRAION
Bell prover helps the gas flow meter test bench to sample and calibrate the gas flow. It can test Rota meter, gas meter, and other forms of gas flow meter. The bell prover can move up and down automatically and the gas-output valve can switch automatically.

**Operational principle and structure**

1. Base  
2. Upright Frame  
3. Liquid Barrel  
4. Air Outlet Valve  
5. Pressure Valve  
6. Temperature Sensor  
7. Standard Barrel  
8. Guide Wheel  
9. Limit Protection Switch  
10. Washer  
11. Lock Nut  
12. Encoder  
13. Gear  
14. Rotating Wheel 1  
15. Wire Rope 1  
16. Rotating Wheel 2  
17. Compensation Curve Wheel  
18. Wire Rope 2 & 3  
19. Compensation Weight  
20. Balance Weight  
21. Horizontal Frame  
22. Air Inlet Valve
**Principle of Operation**

The Bell prover and liquid cell form a sealed space of variable volume. When the Bell moves down into the sealed liquid, through pressure compensation mechanism, the internal gas pressure does not vary along with the changed depth of the sealed liquid. Meanwhile, the gas in the Bell is exhausted to the flow meters through a connect pipe. The exhausted gas volume will be detected compared with the cumulative in the meters.

**Technical parameters**

<table>
<thead>
<tr>
<th>Model</th>
<th>Spec.</th>
<th>Sizes</th>
<th>Working pressure</th>
<th>Pressure fluctuate</th>
<th>Range</th>
<th>Accuracy</th>
<th>Bell prover lifting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>L x W x H mm</td>
<td>kpa</td>
<td>Pa</td>
<td>m(3)/h</td>
<td></td>
<td>Fan type</td>
</tr>
<tr>
<td>LJQ-10</td>
<td>10</td>
<td>650×500×1900</td>
<td>1.0 ~ 1.6</td>
<td></td>
<td></td>
<td>0.2 ~ 0.6</td>
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<tr>
<td>LJQ-20</td>
<td>20</td>
<td>800×550×2200</td>
<td></td>
<td></td>
<td></td>
<td>0.6 ~ 1.2</td>
<td></td>
</tr>
<tr>
<td>LJQ-50</td>
<td>50</td>
<td>1050×650×2300</td>
<td></td>
<td></td>
<td></td>
<td>1.2 ~ 3</td>
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<tr>
<td>LJQ-100</td>
<td>100</td>
<td>1100×850×3000</td>
<td>≤50</td>
<td></td>
<td>3 ~ 6</td>
<td>0.2 ~ 0.5%</td>
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<tr>
<td>LJQ-200</td>
<td>200</td>
<td>1500×1200×3400</td>
<td></td>
<td></td>
<td>6 ~ 12</td>
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<tr>
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<td>1800×1180×4700</td>
<td>1.3 ~ 1.8</td>
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<td>12 ~ 30</td>
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<tr>
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<td>2400×1500×4800</td>
<td>2.5 ~ 3</td>
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<td>30 ~ 60</td>
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<td>2.0 ~ 2.5</td>
<td></td>
<td>30 ~ 120</td>
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<tr>
<td>LJQ-2000A</td>
<td>2000</td>
<td>2700×1900×6750</td>
<td>4.5 ~ 5.0</td>
<td></td>
<td>30 ~ 120</td>
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</tbody>
</table>