OBJECTIVES

CEDRAT TECHNOLOGIES develops customised ElectroMagnetic Actuators, which are dedicated to customer’s specific applications when off the shelves standard products are not suitable. They cover a wide spectrum of applications and markets such as industry, automotive (for example, e-Lift 3 project with PSA), air & space, medtec, etc.

PRESENTATION

CEDRAT TECHNOLOGIES’s customised Solenoid Actuators are designed to be:
- Reliable since the coils are located at the fixed part of the actuator and the mobile part is made of iron
- Robust (simple parts, robust interface, adapted guiding)
- Compatible with severe environments (high temperature, vacuum, etc)
- Mass production-ready

ADVANTAGES

- High acceleration
- High force density
- Easy integration
- Easy to manufacture

VERSATILITY

CEDRAT TECHNOLOGIES’s customised electromagnets have been used in different ranges of:
- stroke: 1mm to 6.6mm
- force: 5N to 120N
EXAMPLES OF ACTUATORS PERFORMANCES

This table summarizes the main characteristics of ElectroMagnetic Actuators already designed and manufactured by CTEC.

<table>
<thead>
<tr>
<th>Stroke (mm)</th>
<th>Magnetic Force (N)</th>
<th>Mobile mass (g)</th>
<th>Size</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALVE ELECTROMAGNETIC ACTUATOR 1</td>
<td>1.8</td>
<td>120</td>
<td>100</td>
<td>Diameter 41mm Depth 86mm</td>
</tr>
<tr>
<td>VALVE ELECTROMAGNETIC ACTUATOR 2</td>
<td>1.7</td>
<td>30</td>
<td>8</td>
<td>Diameter 20mm Depth 23mm</td>
</tr>
<tr>
<td>UNLOCKING ELECTROMAGNETIC ACTUATOR</td>
<td>3</td>
<td>5</td>
<td>21</td>
<td>Diameter 32mm Depth 23mm</td>
</tr>
<tr>
<td>BRUCE PIN-PULLER</td>
<td>6.6</td>
<td>40</td>
<td>8</td>
<td>Diameter 32mm Depth 57mm</td>
</tr>
</tbody>
</table>

APPLICATIONS

- Valve actuation
- Locking and unlocking
- Pin-puller
- Contactor

Fig5: Valve ElectroMagnetic Actuator 1, developed for a fluidic application

Fig6: Valve ElectroMagnet Actuator developed for the e-Lift3 project

Fig7: BRUCE Pin-Puller

Fig8: Space certified Unlocking ElectroMagnet Actuator

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