OBJECTIVES

CEDRAT TECHNOLOGIES offers specific voice-coils adapted to particular clients’ requirements in terms of environment, static and dynamic regulation, motion and efficiency that cannot be entirely met by off-the-shelf standard products.

They are typically suited to highly constrained applications like space and optical devices, and can almost be derived into high performances voice-coils for industrial applications.

PRESENTATION

CEDRAT TECHNOLOGIES’s specific voice-coils are moving coil actuators with the following characteristics:

• very good linearity
• constant force along the stroke
• high dynamic behaviour
• compatible with severe environment
• adapted for different motion types

For controllability requirement with higher dynamic behaviour and robustness, please refer to our MICA technology.

ADVANTAGES

• High dedication to clients’ specifications (“very” competitive towards standard products for a given application)
• High force density
• Very good linearity
• Easy integration
• Versatility

VERSATILITY

CEDRAT TECHNOLOGIES’s specific voice-coils have been used in different ranges of:

• Motion type: linear or rotary motion
• Stroke: 1mm to 30mm
• Force: 1N to 200N
• Frequency: 1Hz up to 1000Hz
APPLICATIONS

- Space applications
- Pump and compressor actuation
- Test benches
- Vibration generation and damping
- Optical devices
- Haptic application
- Fast positioning

<table>
<thead>
<tr>
<th>SPACE VOICE COIL 1</th>
<th>SPACE VOICE COIL 2</th>
<th>SPACE VOICE COIL 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke</td>
<td>+/-12°</td>
<td>+/-15mm</td>
</tr>
<tr>
<td>Force (N)</td>
<td>0.36N.m torque in air</td>
<td>13N in air</td>
</tr>
<tr>
<td>Mobile Mass</td>
<td>152g</td>
<td>130g</td>
</tr>
<tr>
<td>Size</td>
<td>L76 x H34 x D177mm</td>
<td>Ø80mm Depth 65mm</td>
</tr>
<tr>
<td>Comment</td>
<td>Full rotary voice-coil motor With redundancy</td>
<td>Only stator represented With redundancy</td>
</tr>
</tbody>
</table>

![Space Voice Coils](image.png)