Transducer systems for rotorcraft
## Engine accelerometers

### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Specifications</th>
</tr>
</thead>
</table>
| CA 107 | 5 pC/g: 2mg to 400g  
Overload: 2000g  
Res. freq: 25 kHz  
Temp: -70°C to +600°C |
| CA 139 | 10 pC/g: 2mg to 500g  
Overload: 1000g  
Res. freq: 27 kHz  
Temp: -54°C to +400°C |
| CA 135 | 20 pC/g: 2mg to 1000g  
Overload: 2000g  
Res. freq: 35 kHz  
Temp: -54°C to +260°C |

### Components

- CA 107 7xx: MI - Overbraid
- CA 135 102: MI - Overbraid
- CA 139: MI - Overbraid
- CA 107 802: MI - Overbraid

## Airframe accelerometer

### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Specifications</th>
</tr>
</thead>
</table>
| CE 581| 100 mV/g: ± 50g  
Overload: 5000g  
Res. freq: 20 kHz  
Temp: -55°C to +121°C |

### With built-in electronics

- Connector type: MS3113, 4-pin
- CE 581: Uniaxial
- CE 582: Biaxial
- CE 583: Triaxial

### Power supply

- Voltage: +18 to +24 VDC
- Current: 2 to 20 mA
### Cables

<table>
<thead>
<tr>
<th>Type</th>
<th>Temp.</th>
<th>Hard/softline</th>
</tr>
</thead>
<tbody>
<tr>
<td>K 221</td>
<td>200°C</td>
<td>S-MTLN</td>
</tr>
<tr>
<td>K 234</td>
<td>200°C</td>
<td>S-MTLN</td>
</tr>
<tr>
<td>K 230</td>
<td>200°C</td>
<td>S-MTLN</td>
</tr>
<tr>
<td>MI cable with stainless steel over braid</td>
<td>700°C</td>
<td>H-MI</td>
</tr>
<tr>
<td>MI cable</td>
<td>700°C</td>
<td>H-MI</td>
</tr>
</tbody>
</table>
Remote Charge Converters

**RCC 291**

- 1 channel
- Customisable, to fit the sensor’s transfer function and the vibration’s frequency and amplitude.
- Integrated BITE (Built-In Test Equipment)
- Temp: -54°C to +120°C

**Power supply**
- I<sub>constant</sub>: 6 to 20 mA
- V stand-by: 15 VDC

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**RCC 237 / RCC 287**

- 2 channels
- 10 pC/g: 500g (channels A & B)
- 5 pC/g: 400g (channel A)
- 20 pC/g: 1000g (channel B)
- Integrated BITE
- Temp: -54°C to +120°C

**Power supply**
- I<sub>constant</sub>: 6 to 12 mA
- V stand-by: 16 VDC

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**RCC 237 / RCC 287**

- Power supply
  - I<sub>constant</sub>: 6 to 20 mA
  - V stand-by: 15 VDC
Vibro-Meter’s engine and vibration monitoring systems have been used on almost all commercial aircraft and engines since 40 years.

We design and manufacture high-end transducers systems for rotorcraft applications, which are qualified for engines and airframes vibration analysis. Our systems include piezoelectric accelerometers, cables, and charge converters.

- Absolute vibration for helicopter engines and airframes.
- High temperature capability from -70°C to +600°C.
- All products shown herein benefit from more than 40 years experience.
- No maintenance required for our vibration measuring systems.

Vibro-Meter supplies complete measuring chains as well as single components. We offer a wide range of standard products suited to the helicopter market’s needs. With our commitment to engineering expertise, we also tailor designs to our customer’s needs.

Transducers, cables and electronics

References

Vibro-Meter’s products are widely used on many helicopter programs, including:

- Boeing CH-47 Chinook
- Eurocopter EC 225 Super Puma
- Eurocopter EC 155 Dauphin
- NHIndustries NH90
- Sikorsky UH-60 Blackhawk
- Sikorsky CH-53
- Sikorsky S-92

Quality approvals

- Quality system:
  SAE AS9100
  BS EN9100:2003
  BS EN ISO9001:2000

- Production organisation:
  JAA JAR Part 21 Subpart G

- Repair:
  FAA FAR Part 145
  JAA JAR Part 145
  CAAC CCAR Part 145
  EASA EASA Part 145
Since its foundation in 1952, Vibro-Meter has established itself as a leader in designing and manufacturing electronic measurement and processing systems, whilst remaining a leading supplier of reliable, high quality instrumentation systems to aerospace customers world-wide, providing sensors, remote charge converters (RCC) and vibration processing units (VPU) for rotorcraft systems for both civil and military applications.

The company’s most significant asset is its ability to engineer reliable high quality, customer-orientated solutions. Vibro-Meter became a member of the Meggitt group of companies in 1998.

With our commitment to engineering expertise, comprehensive manufacturing resources, world-wide technical support and full service repair capabilities, help is never far away. Our international network of subsidiaries and distributors is always available.

Vibro-Meter is a Meggitt group company. Headquartered in the UK, Meggitt PLC is an international group of companies operating in North America, Europe and Asia. Known for its specialist extreme environment engineering, Meggitt is a world leader in the aerospace, defence and electronics industries.