

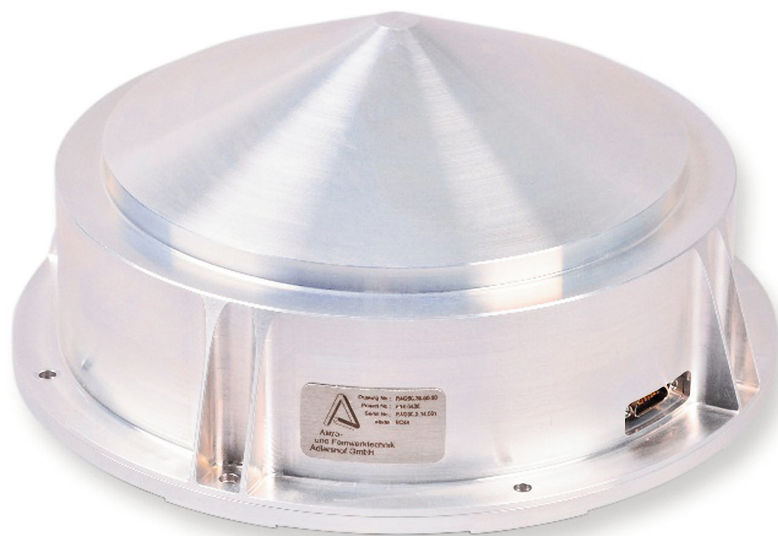


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**Space Technology**  
AOCS-Components



**Reaction Wheel  
RW 250  
for Small  
Satellites**

The RW 250 is a **smart** Reaction Wheel with following features:

- Integrated wheel drive electronics with latch-up protection
- Different operation modes for speed and acceleration using model based controllers
- High torque and speed stability (low noise)
- Provides extensive housekeepings (e.g.: speed, voltage, current, temperatures)
- Internal compensation of friction and time delays
- Low level emitted vibrations, due to the mechanical design and the high level of alignments and balancing

Parameter	Data
<b>Performance:</b>	
Angular momentum	3.7 Nms @ 7080 rpm
Nominal rotation speed	6 000 rpm
Max. rotation speed	approx. 7 080 rpm
Nominal torque (max. commendable)	0.095 Nm
<b>Mechanical:</b>	
Mass	≤ 2.5 kg
Dimension (with flange)	Ø 197 mm x 92 mm
Moment of inertia (rotating mass)	$4.979 \cdot 10^{-3} \text{ kgm}^2$
<b>Electrical:</b>	
Voltage	23 V to 34 V
Power consumption	
Standby (motor off)	< 2.5 W
Conservation of nominal rotation speed	< 13 W
Maximum (no limitations)	≤ 100 W
<b>Data Interfaces:</b>	RS-485 (others on request)
<b>General:</b>	
Operation temperature range	-20°C to +50°C
Non-operation temperature range	-40°C to +65°C
Design lifetime	7 years in low earth orbit
Storage time	3 years (incl. max. 240 h of ground operation)

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