Reaction Wheels

Long-lasting AGILITY

Plug & play

Embedded electronics

Reliable technology

Small Wheels

20 to 60 mNms

NASA | State-of-the-art 2023

Innovative Spacecraft Solutions.

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2024

Small Wheels

For **10** to **80 kg satellites**

| State-of-the-art 2023

Performances

	RW20	RW40	RW60
MAX MOMENTUM	**20** mNms	**40** mNms	**60** mNms
MAX TORQUE	**2** mNm	**4** mNm	**6** mNm
MAX SPEED	6,000 rpm		
ACCURACY	Down to 2 rpm		

Mechanical

		RW20	RW40	RW60
MASS	1 Wheel	0.142 kg	0.230 kg	0.270 kg
	4 Wheels Cluster	0.850 kg		
VOLUME	1 Wheel	Ø 48 x 28.2 mm	Ø 67 x 44.8 mm	Ø 65.6 x 44.8 mm
	4 Wheels Cluster	95 x 95 x 61 mm		

Electrical

		RW20	RW40	RW60
SUPPLY VOLTAGE	14 V [10 V; 18 V]			
POWER VACUUM & MAX SPEED	Steady	0.8 W	0.9 W	0.9 W
	Max torque	3.5 W	6.2 W	7.7 W
PROTOCOL	Full duplex RS 422/485			

Environmental

		RW20	RW40	RW60
TESTS	QSL	25 g		
	Random	17.12 g	21 g	21 g
	Shock	1,000g / 2,000Hz		
OPERATIONAL T°	- 20°C ; + 40°C			
NON-OPERATIONAL T°	- 30°C ; + 50°C			
RADIATION ELECTRONIC BOARD LEVEL	< 20 k.rad			
LIFETIME	**8 years** 100,000 zero crossing tests			
FIRST FLIGHT	Early 2025	Mid 2024	Early 2025	
HIGH RELIABILITY	36 FIT			

Traceability | process & components

EN9100 and EIDP

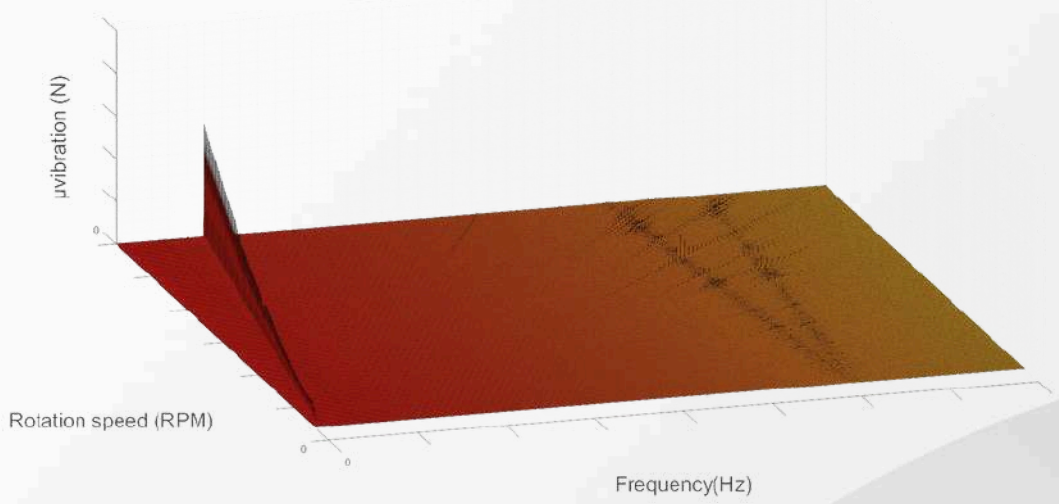
Manufacturing control

More than 30 parameters controlled

Not all heroes wear capes
some keep **satellites steady.**

Waterfall plot

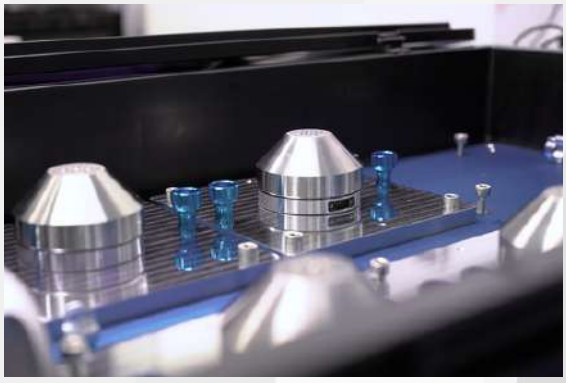
They are developed for every reaction wheel to analyze the micro-vibrations it generates.
Customers have the option to receive these plots at the time of delivery.

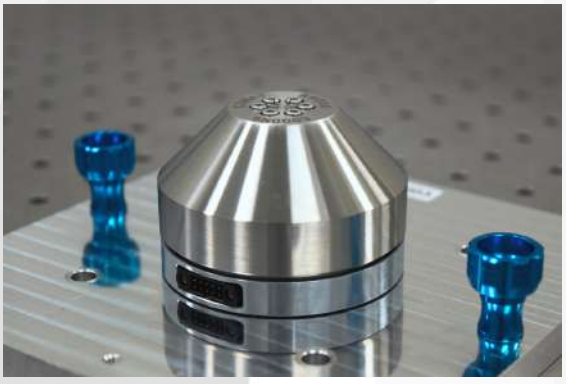


Photos

RW**20**

RW**40-60**





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