

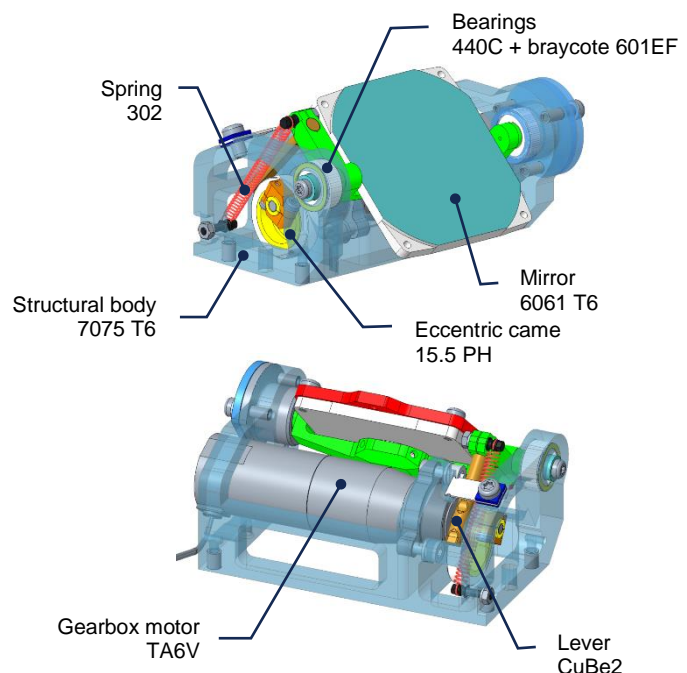
Scanner mechanism (mirror 47 x 48.5mm)

1 - Application

- The scanner mechanism is specifically designed to comply with spatial applications specifications:
 - Dimensioning in respect with ECSS standards
 - Vacuum compatibility : 1.10^{-7} mbar
 - Operational temperature range : -55°C / +45°C (qualification level)
 - Vibration and shock environment : sinus 30g - random 33g RMS - shock 360g

2 - Description

- The main functions of the scanner mechanism are :
 - Supporting the mirror in the instrument
 - Actuating the mirror in rotation
 - Adjust and maintain the mirror orientation
- The Scanner mechanism is principally composed by :
 - 1 plane Mirror (47 x 48.5mm) stuck on its interface part
 - 1 Structural body
 - 1 bearing assembly : 3 bearings
 - 1 Gearbox stepper motor
 - 1 Lever + Eccentric cam with bearing to transform the gearbox output shaft rotation in mirror rotation



3 – Technical Data

CHARACTERISTICS	SPECIFICATIONS
Travel :	27°
Science stroke	+/-10°
Calibration position	+17°
Theoretical resolution :	0.0017°/step (2 steps mini)
Bidirectional repeatability :	0.005°
Max velocity :	1.5°/s
Size (L x l x H) :	88.6 x 58.65 x 43.65mm
Weight :	240g
Material :	Aluminum / Stainless steel / TA6V / CuBe2
Electronic controller parameters:	Stepper motor driver
Tension / Current	20V to 48V / 0.6A RMS
Driving mode	Full step or microstep (2 phases ON)
Driving frequency	100 to 1000 full steps/s
Environment :	
Vacuum	1.10 ⁻⁷ mbar
Temperature (qualification)	OP : -55°C/+45°C NOP : -55°C / 60°C
Vibrations	Sinus 30g - Random 33g RMS
Shocks	360g
Variant and options :	<ul style="list-style-type: none"> • Specific design possible on demand: <ul style="list-style-type: none"> ○ Mirror dimensions ○ Environment (temperature, vibrations...) ○ Encoder / limit switches ○ ...

4- Dimensions (mm)

