

> 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



Fig1: Space Voice Coil 1 for MTG Scanning Assembly for SENER



Fig2: Space Voice Coil 2 (stator shown only) for IASI Interferometer for CSEM

> ACTUATORS PERFORMANCES

	SPACE VOICE COIL 1	SPACE VOICE COIL 2	SPACE VOICE COIL 3
Stroke	+/- 12°	+/- 15mm	25mm
Force (N)	0.36 N.m torque in air	13 N in air	90 N in air
Mobile mass	152 g	130 g	235 g
Size	L 76mm x H 34mm Depth 177mm	Diameter 80mm Depth 65mm	Diameter 80mm Depth 123mm
Comment	Full rotary voice-coil motor With redundancy	Only stator represented With redundancy	Stator and moving coil No redundancy

> APPLICATIONS

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



Fig3: Space Voice Coil 3

For more information, please contact:

CEDRAT TECHNOLOGIES
59 Chemin du Vieux Chêne - Inovallée
38246 Meylan Cedex - France
actuator@cedrat-tec.com
Phone: +33 (0)4 56 58 04 00 - Fax: +33 (0)4 56 58 04 01