MISTRAL hexapod

Dynamic hexapod for motion

KEY FEATURES

- Payload capacity up to 1 ton
- Linear travel range ± 460 mm
- Angular travel range ± 30°

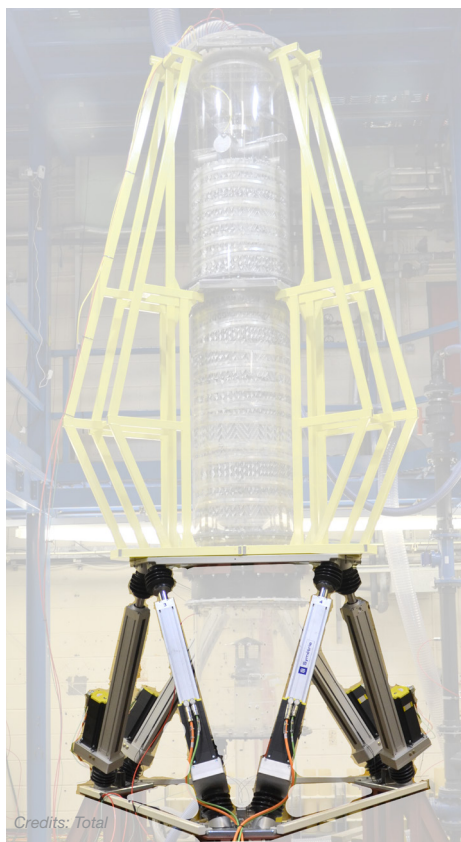## APPLICATIONS

- Motion simulator
- Swell simulator
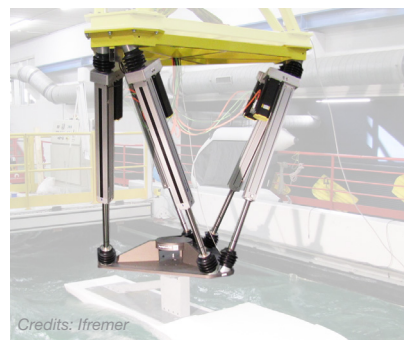- High payload positioner
- Driving simulator

Credits: Thales Communications & Security

MISTRAL hexapod reproduces ship motions to test the stabilization performances of large maritime SATCOM antennas.

Credits: Total

MISTRAL hexapod simulates the motion of a floating gas production unit to characterize hydrodynamic effects of the swell on the chemical reactions in a gas deacidification column. These tests allow to improve performance and robustness of the processing units.

Credits: Ifremer

MISTRAL hexapod orientates a ship model in a wave basin to reproduce maritime conditions and test the shipbuilding techniques.

Credits: ISM-ENSAM

The surfer can practice various wave situations played by the Simusurf hexapod and improve his gestures through practice and analysis by recording his movements with additional sensors. Simusurf Hexapod can be used as a discovery and learning tool for the casual surfer or as a performance and training tool for the professional surfer.

	MISTRAL 600		MISTRAL 800	
	for 1 000 kg payload	for 500 kg payload	for 1 000 kg payload	for 500 kg payload
Motion and positioning				
Travel range Tx, Ty (mm)	± 400	± 400	± 460	± 460
Travel range Tz (mm)	± 300	± 300	± 400	± 400
Travel range Rx, Ry (deg)	± 30	± 30	± 30	± 30
Travel range Rz (deg)	± 40	± 40	± 40	± 40
Speed Tx, Ty, (mm/s)	1 000	1 200	1 000	1 200
Speed Tz (mm/s)	600	1 000	600	1 000
Speed Rx, Ry (°/s)	50	100	50	100
Speed Rz (°/s)	70	140	70	140
Acceleration Tx, Ty, (mm/s²)	5 000	8 000	5 000	8 000
Acceleration Tz (mm/s²)	6 000	8 000	6 000	8 000
Acceleration Rx, Ry (°/s²)	500	800	500	800
Acceleration Rz (°/s²)	700	1 100	700	1 100
Mechanical properties				
Payload capacity (kg) (vertical orientation only)	1 000	500	1 000	500
Motor type	Brushless	Brushless	Brushless	Brushless
Miscellaneous				
Operating temperature range (°C)	0 to + 50		0 to + 50	
Size mobile platform (mm)	Ø 1 386		Ø 1 386	
Height in middle position (mm)	~1 440		~1 765	
Mass (kg)	~ 400		~ 450	
Cable length (m)	10		10	
Options	IP 64 motor protection Acquisition and storage of motions API Customized platform design			
Controller				
Interface	Ethernet			
Power supply	400 VAC (three-phase) / 32 A			

The performances are specified for single axis motions, with all other axes at midrange and for a rotation center in the middle of the mobile platform.

Hexapod in middle position

1 440 (MISTRAL 600) or 1 765 (MISTRAL 800)

Ø 2 278