

The GL-6000 GRYPHON Regional Directors

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AIRCREW TRAINING
SYSTEMS

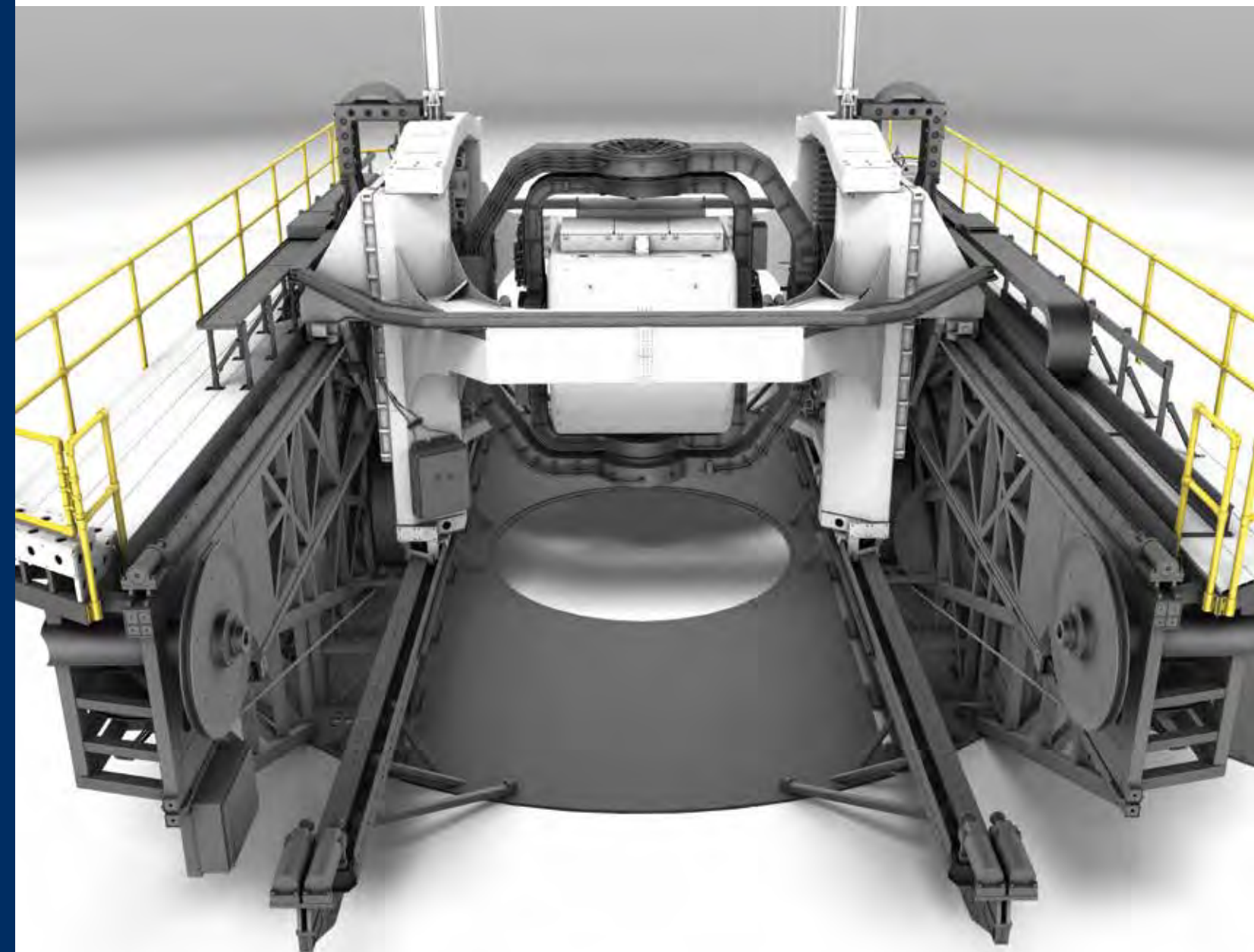
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AIRCREW TRAINING
SYSTEMS

GL-6000
GRYPHON™



The Future of Human Factors Training & Research

TRAINING AND RESEARCH CAPABILITIES

- | Upset Recovery | Spatial Disorientation | Situational Awareness | Fatigue Countermeasures |
- | Cardiovascular Responses to Changes in Acceleration | Flight Phase Transition Training |
- | Human Performance Improvement & Tolerance | Adaptation to Novel Motion Environments |

Current and future generation aircraft may subject pilots to motions and forces that they are not currently accustomed to. Current training devices cannot replicate these physiologic stressors, which can induce spatial disorientation, loss of situational awareness, and/or create an upset situation. The GYROLAB GL-6000 has the capability to authentically replicate these novel motion environments to provide effective and transferable human factors training to pilots.



SAFETY FEATURES

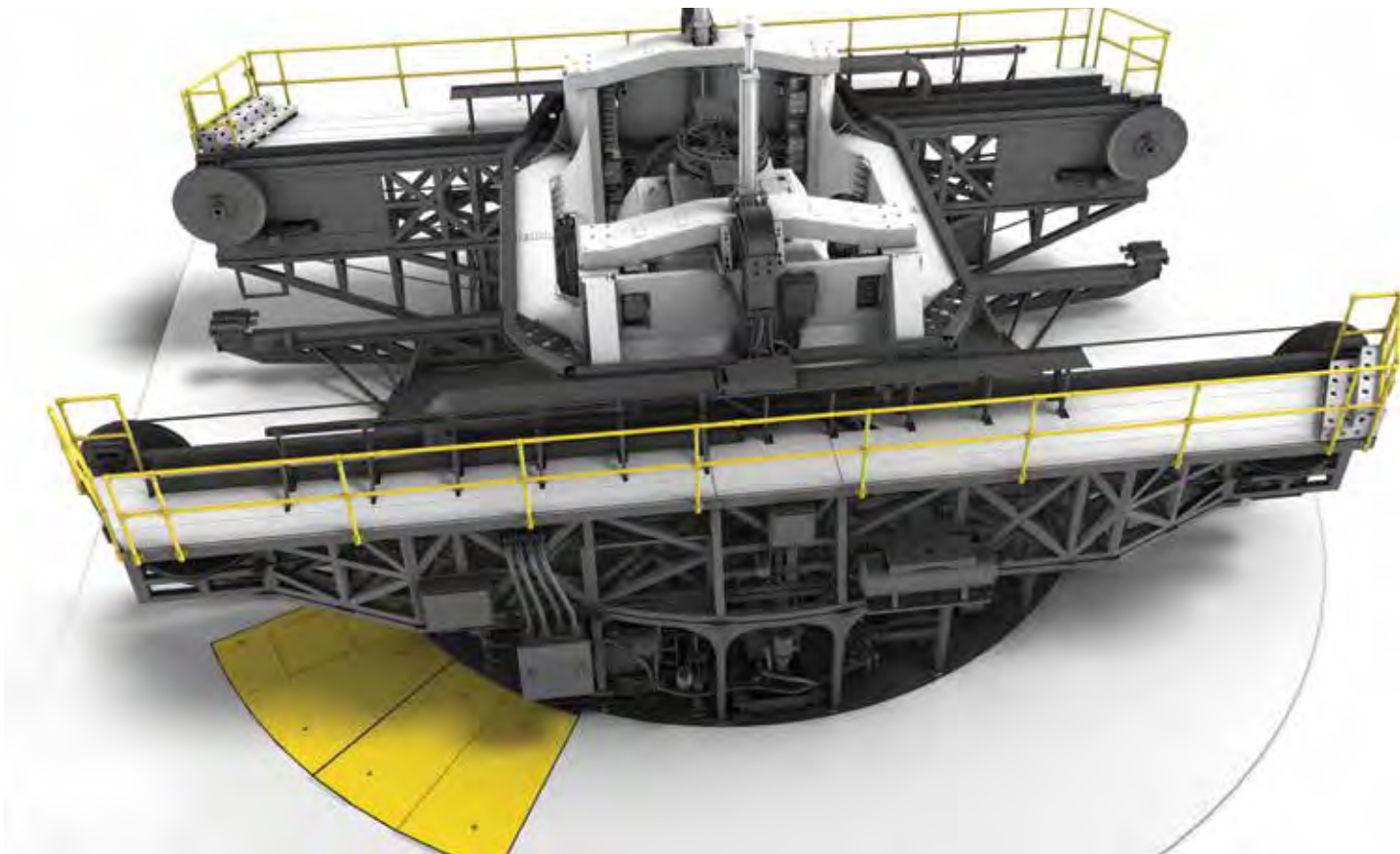
- Man-rated Design
- Independent Safety Computer
- CBIT & Embedded Diagnostics
- Dual Stop Controls for Both Operator and Rider
- Safe Motion Envelope Monitoring (Real Time)
- Automated Brakes on Each Axis
- Dynamic Electrical Braking
- Fail-Safe Auxiliary Mechanical Brakes
- Online & Offline Un-interruptible Power Supply
- System & Facility Interlocks
- Floor Level Emergency Egress and Trainee Extraction

MEDICAL & RESEARCH DATA ACQUISITION SYSTEM (DAS)

- Real-time Monitoring
- Real-time Data Acquisition
- Data Post-processing Capability
- Data Storage and Recall
- Audio and Visual
- GL-6000 Motion System Performance Data
- Medical Data (Customized)
- Vehicle Operation Data

ADVANCED MOTION SYSTEM

- 6 Axes of Motion (Rotary, Pitch, Roll, Yaw, Vertical, Horizontal)
- $\pm 360^\circ$ Continuous Rotation in 4 axes (Rotary, Pitch, Roll and Yaw)
- 15–17 Foot Horizontal Track
- ± 3 Foot Vertical Carriage
- Maximum G: ± 3 G
- 53 Foot Arm Structure
- Electro-mechanical Drives



The GL-6000 is a flexible, multifunctional device with advanced motion capabilities.

Complex Human Factors Issues

The GL-6000's unique motion capability, wide field-of-view real-world visuals, and reconfigurable cabin can support operational and clinical research into complex human factors issues for aircraft, land vehicles, and water vehicles.

Support For Clinical Research

The GL-6000's advanced Medical Monitoring and Data Acquisition (DAQ) System makes it the ideal platform to support cutting edge

clinical research into vestibular functioning, human interpretation of orientational percepts, attention management, and decision making and skill selection in a dynamic environment.

Operation Research Into Human Factors Issues

The GL-6000 can support operational research into human factors issues including man-equipment interface, cabin ergonomics, and operating in novel environments.

Mishap Investigation

The GL-6000 can support mishap investigation by accurately replicating the conditions of the mishap, thereby helping to prevent their reoccurrence.

GL-6000 Production & Assembly



FOUNDATION

PLANETARY POWER ASSEMBLIES

ARM

GONDOLA

SLED ASSEMBLY



ARM



GONDOLA



FOUNDATION



SLED ASSEMBLY



MAIN PLANETARY POWER ASSEMBLIES



CAPABILITIES

- Research
- Spatial Disorientation
- Situational Awareness
- Fatigue Countermeasures
- Dynamic G Tolerance
- Cardiovascular Responses to Changes in Acceleration

SPECS

- Human Performance Improvement & Tolerance
- Adaptation to Unusual Acceleration Environments
- Flight Phase Transition Training
- STOVL & VTOL Dynamic Flight Simulation

- 6 Axes of Motion (Rotary, Pitch, Roll, Yaw, Vertical, Horizontal)
- $\pm 360^\circ$ Continuous Rotation in 4 axes (Rotary, Pitch, Roll and Yaw)
- 15–7 foot horizontal sled
- ± 3 foot vertical carriage
- Maximum G: ± 3 G

- 53 foot arm structure
- Electro-mechanical drives

SAFETY FEATURES

- Man-Rated Design
- Independent Safety Computer
- CBIT & Embedded Diagnostics
- Dual Stop Controls for Both Operator and Rider
- Safe Motion Envelope Monitoring (Real Time)
- Automated Brakes on Each Axis
- Dynamic Electrical Braking
- Watchdog Timer
- Fail-Safe Auxiliary Mechanical Brakes
- Online AND Offline Un-interruptible Power Supply

- System & Facility Interlocks
- Floor Level Emergency Egress and Trainee Extraction

COCKPIT

- Aircraft specific
- Research configurations
 - Wide field-of-view visual display
 - Built-In-Test (BIT)
 - Medical Monitoring

FLIGHT TRAINING CHARACTERISTICS

- Vertical Take Off and Vertical Landing (VTOL)
- Short Take Off and Landing (STOL)
- Short Take Off and Vertical Landing (STOVL)
- Conversion to forward flight or hover
- Hover (In Ground Effect IGE, Out of Ground Effect OGE)
- Vertical TO & LD