### CAE 3000 Series Military helicopter flight and mission simulators

CAE 3000 Series helicopter flight and mission simulators provide an immersive training experience for the full range of military helicopter pilot training requirements. This new CAE simulation capability offers unprecedented realism for helicopter-specific mission training, including ship landing, search and rescue, hoisting operations, combat scenarios, confined area and rooftop landing, night-vision goggle missions and other operations.

The CAE 3000 Series is the result of CAE's decades of simulator experience and helicopter flight training expertise, the requirement for militaries to extend the use of simulation-based training, extensive input from CAE's Helicopter Advisory Board (which includes pilots, operators, manufacturers, and insurers), and assessment of current and emerging regulatory requirements.

# Simulation improves safety and efficiency

Simulation is cost-effective and improves safety by enhancing pilot proficiency and eliminating risks of training in the aircraft. The simulation environment enables risk-free exposure to events not suitable or possible for training on the actual aircraft. Training in a CAE 3000 Series helicopter flight simulator costs less than training in a turbine-powered helicopter, extends the service availability of aircraft fleets, and frees up aircraft for operational use.

### Maximum training value to enhance helicopter mission readiness

The CAE 3000 Series enables:

- Unlimited aircrew training schedules not influenced by training aircraft availability
- More effective training, including tasks not feasible for training on actual aircraft
- Realistic visual fidelity for near-the-surface maneuvering
- Designed for fast cockpit interchanges for maximum utilization and training flexibility
- Low acquisition costs

- ➔ Significantly reduced lifecycle training costs
- → Ease of operation and maintenance
- World-renowned CAE customer support service

# CAE is a helicopter flight simulation and training leader

CAE has delivered the largest number of high-end helicopter synthetic training devices than any other company, with more than 120 devices fielded representing nine different manufacturers – AgustaWestland, Bell, Boeing, Eurocopter, Hindustan Aeronautics Limited (HAL), Kaman, MD Helicopters, NH Industries, and Sikorsky.

CAE-owned and joint venture helicopter flight training operations (civil and military) are located in five global regions:

#### Asia

- India: Bell 212/412, AS365 Dauphin N3 and Dhruv in Bengaluru at the Helicopter Academy to Train by Simulation of Flying (HATSOFF)
- → China: S-76C++ at Zhuhai Flight Training Center
- Brunei: S-70i Black Hawk; S-92 at CAE Brunei Multi-Purpose Training Centre

#### Europe

- Italy: AW109 (multiple variants), AW139, AW169 and AW189 in Sesto Calende at Rotorsim
- Norway: AS332L/L1 Super Puma, S-61 and S-92 in Stavanger
- → Sweden: Bell 412 in Stockholm
- Germany: NH90 training in Bückeburg, Fassberg and Holzdorf
- UK: AS332L2 Super Puma in Aberdeen, Scotland; AW189 (Rotorsim) in Aberdeen, Scotland; CH-47 Chinook, AW101 Merlin and Puma at RAF Benson in Oxfordshire, England

#### Latin America

- Brazil: S-76C++, Eurocopter EC-225 and S-92 in Sao Paulo, AW139 in Sao Paulo
- → Mexico: Bell 212/412 in Mexico City / Toluca

#### **Middle East**

 UAE: Bell 212/412 at Emirates-CAE Flight Training

#### **North America**

- Canada: S-76C++ in Vancouver
- USA: AW139 (Rotorsim), S-76B and S-76C+ in Morristown, New Jersey, near New York City
- → USA: AS350B2 Astar in Phoenix, Arizona



### The CAE 3000 Series addresses current and emerging regulatory requirements

The CAE 3000 Series is designed to address emerging global standards for helicopter flight simulation training devices (FSTD), developed by an international working group sponsored by the International Civil Aviation Organization (ICAO). The CAE 3000 Series has already been qualified to U.S. Federal Aviation Administration (FAA) Level-D standards, and will also meet European Aviation Safety Agency (EASA) Level D fidelity.

# Unprecedented visual realism

All CAE 3000 Series military helicopter flight and mission simulators feature a CAE Medallion<sup>™</sup>-6000 visual system with high-definition fixed-matrix projectors, up to a 220-degree horizontal by 95-degree vertical field of view direct projection dome with chin window coverage, and high-density 3D databases based on the common database (CDB) format tailored to helicopter training operations.





### Advanced Computer Generated Forces

The CAE 3000 Series for military helicopters includes computer generated forces to support complex mission training as well as joint and coalition operations through HLA (high-level architecture) connectivity. Enemy threats behave with realistic doctrines, and can be tailored with interactive scenario creation tools. Weapon systems and counter-measures are accurately simulated, including proper ballistics and scoring.

## Industry-leading vibration, motion cues

All models of the CAE 3000 Series feature CAE's industry-leading three degrees-offreedom vibration platform.CAE 3000 Series full-flight and mission simulators include six degrees-of freedom CAE True<sup>™</sup> electric motion system and high-fidelity digital control loading.



## Highly realistic mission training scenarios

- Offshore maritime environments, including wind and 3D wave effects up to Sea State 6
- Realistic ship deck landings in high seas, including wind turbulence caused by ship
- Confined area landing procedures
- Helipad, oil platform, rooftop and pinnacle landings
- Dynamic scenes in highly detailed urban areas in support of emergency response mission training
- ➔ Night flying and day/night transition
- Inadvertent entry into instrument meteorological conditions (IMC)
- Night vision goggles (NVG) and forwardlooking infrared (FLIR)
- Open-format Common Database (CDB) synthetic environment, facilitating content reuse, correlated interoperability and fast mission rehearsal
- HLA and DIS connectivity to enable distributed mission training
- Scenario editors enable customization to specific end-user training needs.

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