

# Hypobaric Facility

The Hypobaric Facility, also known as the altitude chamber, is one of the largest and most capable in Europe. The facility – managed by QinetiQ under the Long Term Partnering Agreement (LTPA) Contract on behalf of the MOD – enables assessment of human performance at altitude and the testing of aircraft oxygen life support systems and equipment by precisely simulating the cabin altitudes of all types of military and commercial aircraft, including gradual or rapid loss of cabin pressure.

Typically the chamber, located at MOD Boscombe Down, is used to assess the effectiveness of aircraft life support systems using both manned and unmanned tests. It is also used for aeromedical research and aircrew training.

Inside the chamber there is a supply of oxygen for breathing and compressed air for the inflation of protective garments. The chamber has an intercom system to allow verbal communication between the occupants and the operators outside. The video system within the chamber enables monitoring and recording of all experimental assessments performed. Instrumentation ports enable instrumentation cables and other experimental or monitoring services to pass through the chamber walls.

# QINETIQ

The three-compartment hypobaric chamber is capable of achieving simulated altitudes in excess of 100,000 feet, with an initial rate of climb of 40,000 feet per minute. The chamber measures 5.7m x 3.7m x 2.4m high and can accommodate up to eight people in its largest compartment. The facility includes a vacuum reservoir that enables rapid

decompressions of the chamber to take place. Rapid decompressions with a pressure change of 70kPa in 0.1 second are attainable, equating to a decompression from 8,000ft to 65,000 ft.

The dimensions of the chamber are as follows:

## Large compartment

<b>Internal dimensions</b>	Length: 3200mm	Width: 2100mm
<b>Access door</b>	Height: 2070mm	Width: 700mm

## Small compartment

<b>Internal dimensions</b>	Length: 2400mm	Width: 1700mm
<b>Access door</b>	Height: 2070mm	Width: 700mm

## Capsule compartment

<b>Internal dimensions</b>	Length: 1100mm	Width: 750mm
<b>Access door</b>	Height: 1550mm	Width: 400mm to 890mm (narrower at top)
<b>Access area</b>	Height: 1550mm	Width: 330mm to 700mm (narrower at top)



## Collaborating with QinetiQ

At QinetiQ we bring organisations and people together to provide innovative solutions to real world problems, creating customer advantage.

Working with our partners and customers, we collaborate widely, working in partnership, listening hard and thinking through what customers need. Building trusted partnerships, we are helping customers anticipate and shape future requirements, adding value and future advantage.

[www.QinetiQ.com](http://www.QinetiQ.com)

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