

## Notes on Installation of Autoneum Alpha Cabin

### 1. Transport / Handling

#### Unloading

The Alpha Cabin is delivered at the customer site on a wooden pallet wrapped in cardboard box.



**Weight: 1950kg (including wooden pallet) – Dimensions: 322 x 237 x 203 cm**

The Alpha Cabin can be unloaded from the transport truck by means of a fork-lift truck.



The fork-lift truck used should have forks of at least 2.2 metres length, which, for safety reasons, should be about 1.5 metres apart.

Further instructions for unloading the Cabin from the wooden pallet are provided together with the system.

The Alpha Cabin is fitted with a lifting hook on a beam by means of which it may be safely lifted by a suitable crane (weight of Cabin approximately 1'700kg).

Alternatively, the Cabin may be lifted from underneath its floor by means of a fork-lift truck. Since it is essential that the floor of the cabin is supported over its full width, the fork-lift truck used should have forks of at least 2.2 metres length, which, for safety reasons, should be about 1.5 metres apart.

## Transport to Installation Site

The Autoneum Alpha Cabin is on casters (wheels). It can thus be moved on flat, normally smooth, hard floors without problem. 3-4 people can push the Alpha Cabin on flat floors.

Alternatively, the Cabin may be transported on a fork-lift truck as above.

**Note that the dimensions of the cabin are such that door apertures of at least 2.4 x 2.05 metres are required (see enclosed data sheet below).**

## 2. Installation Site

### Acoustic Environment:

The high level of acoustic insulation of the Alpha Cabin, together with a background noise compensation in the measurement electronics, means that the Alpha Cabin does not require to be installed in a specially quiet environment. A normal laboratory environment is normally sufficient (SPL 40-50dB). The quality of the measurements is however improved if the surroundings are not too loud. It is particularly advisable to avoid environments subject to impulsively or irregularly occurring noises.

### Foundations / Vibration Environment:

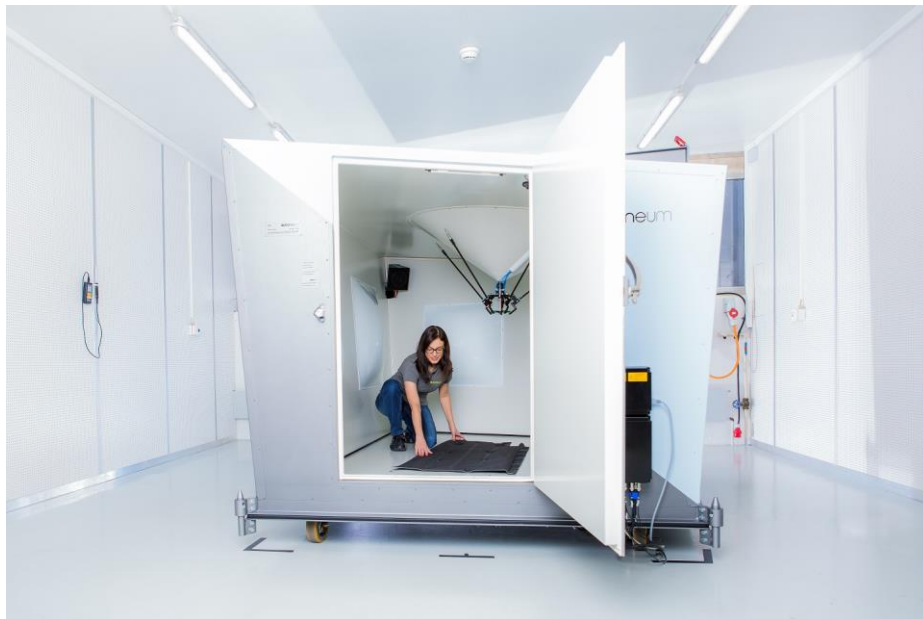
A horizontal floor is necessary, otherwise, normally no special measures are necessary if the Alpha Cabin is installed in a normal laboratory environment. Please consult Autoneum however if the Cabin is to be installed in a site exposed to significant structure-borne noise, e.g. in a factory building with heavy machinery.



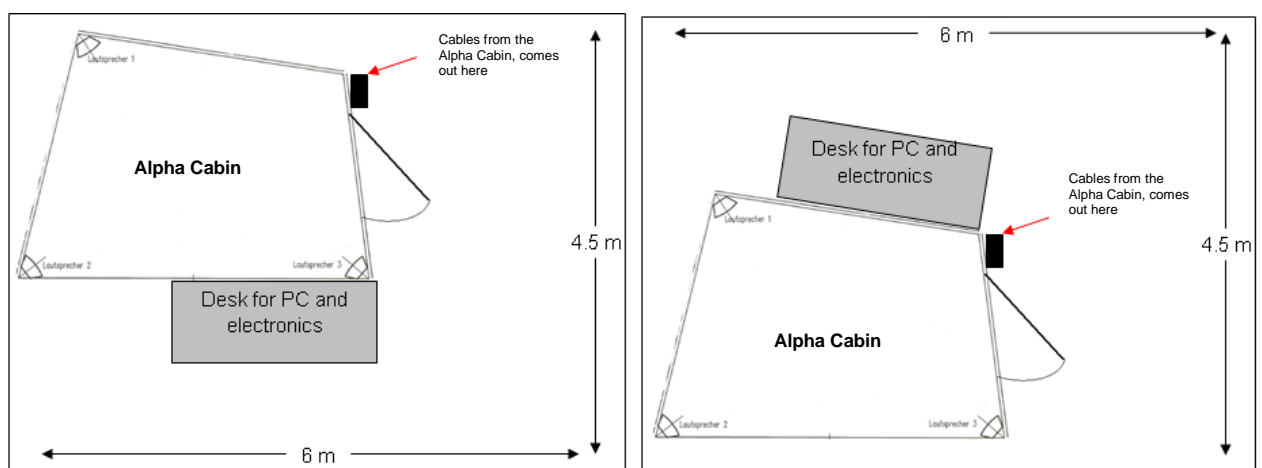
## Room requirements / Atmospheric Environment:

The floor area required by the Cabin itself is approximately 3.3 x 2.4 metres (see enclosed data sheet). Adequate space (at least 2.5 metres) should however be allowed in front of the Cabin (the door is in a shorter side) for the measurement equipment, access, manipulation of the samples, etc. A room size is about 6 x 4.5 meters gives a comfortable work space.

**The length of the cables coming from the Alpha Cabin to PC and electronics, are about 5 meters long.**



## Layout examples:



If it is intended to measure exceptionally large samples that cannot be introduced into the Cabin via the door, it should be noted that for these cases it is foreseen that the body of the cabin can be lifted away from its

floor. In this case, an overhead crane (minimum 1.5 tons capacity) and adequate room height are required.

Acoustic absorption measurements must be performed at normal room temperatures in an atmosphere of

- **at least 50% relative humidity.**
- **a temperature between 20 and 28 degrees Celsius.**

This high relative humidity is most conveniently maintained if the Alpha Cabin is installed in a room that is not too big.

In order to avoid malfunctions and damages of the electronics, the operative conditions of the system must not exceed the below ranges

- **Temperature: 10°C to 35°C**
- **Relative Humidity: 20% to 80% noncondensing**

#### Electrical Power:

No special arrangements are required (see data sheet on following page). 230V, 50Hz. Other configurations on request.

**The Alpha system has 5 power cables** (PC, screen, control unit, amplifier and the cabin itself) mounted on a power strip. The length of the power cables from the power strip is about 1,7 meter long.

**The customer has to arrange that there is a power socket available at the table for the PC.**

**Main data of the Alpha Cabin****Physical dimensions**

Volume of cabin:	6.44 m <sup>3</sup>
Interior surface area:	22.6 m <sup>2</sup>
Overall dimensions of cabin (L x W x H):	3.22 x 2.37 x 2.03 m
Weight of complete Alpha Cabin:	1700 kg
Weight of the cabin without floor:	1070 kg
Inside surface area of the cabin	22.6 m <sup>2</sup>
Dimensions of the standard sample	1 x 1.2 m <sup>2</sup>
Surface area of the absorbent part to be measured	0.6 to 2.4 m <sup>2</sup>

**Power Requirements**

230V, 50Hz, 110V, 60Hz  
(Other mains voltages and frequencies are available on request)

400 W Power consumption (complete system including PC and screen)

**Environment Requirements for Electronics**

Temperature	10°C to 35°C
Relative Humidity	20% to 80% noncondensing

**General**

No. of positions of the microphone	5
Loudspeakers (3)	8 Ohm, 50 Watt
Frequency range	5 octave bands 0.5 to 8 kHz and 15 1/3 octave bands from 0.4 to 10 kHz