



**HYDROSWING DOORS**

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**WIND LOADINGS**

# Wind Loading — Hydroswing®

## Standard/Regular Hydroswing®

Hydroswing® are designed to meet relevant local or regional codes in the closed position.

### The relevant codes within the USA are:

American Society of Civil Engineers (ASCE)  
International Building Code (IBC).

### The relevant codes within the United Kingdom and the rest of the world are:

Eurocode 1: Actions on structures — Part 1-4: General actions —  
Wind Actions (BS EN 1991 1991-1-4:2005)

Loading For Buildings — Part 2: Code Of Practice For Wind Loads  
(BS6399-2:1997)

In the closed position the door will withstand the relevant mean wind speed levels as defined by these codes.

In the open position the performance of the door is dependent upon several factors including but not limited to the size and the overall weight of the door. In normal circumstances the windspeed required to damage the door is significantly above operating conditions we would expect the door to be opened in.

Average wind loading for standard doors in the open position is 35mph\*.

## Specialist Hydroswing®

In certain circumstances Hydroswing® customers require higher than standard performance from their door.

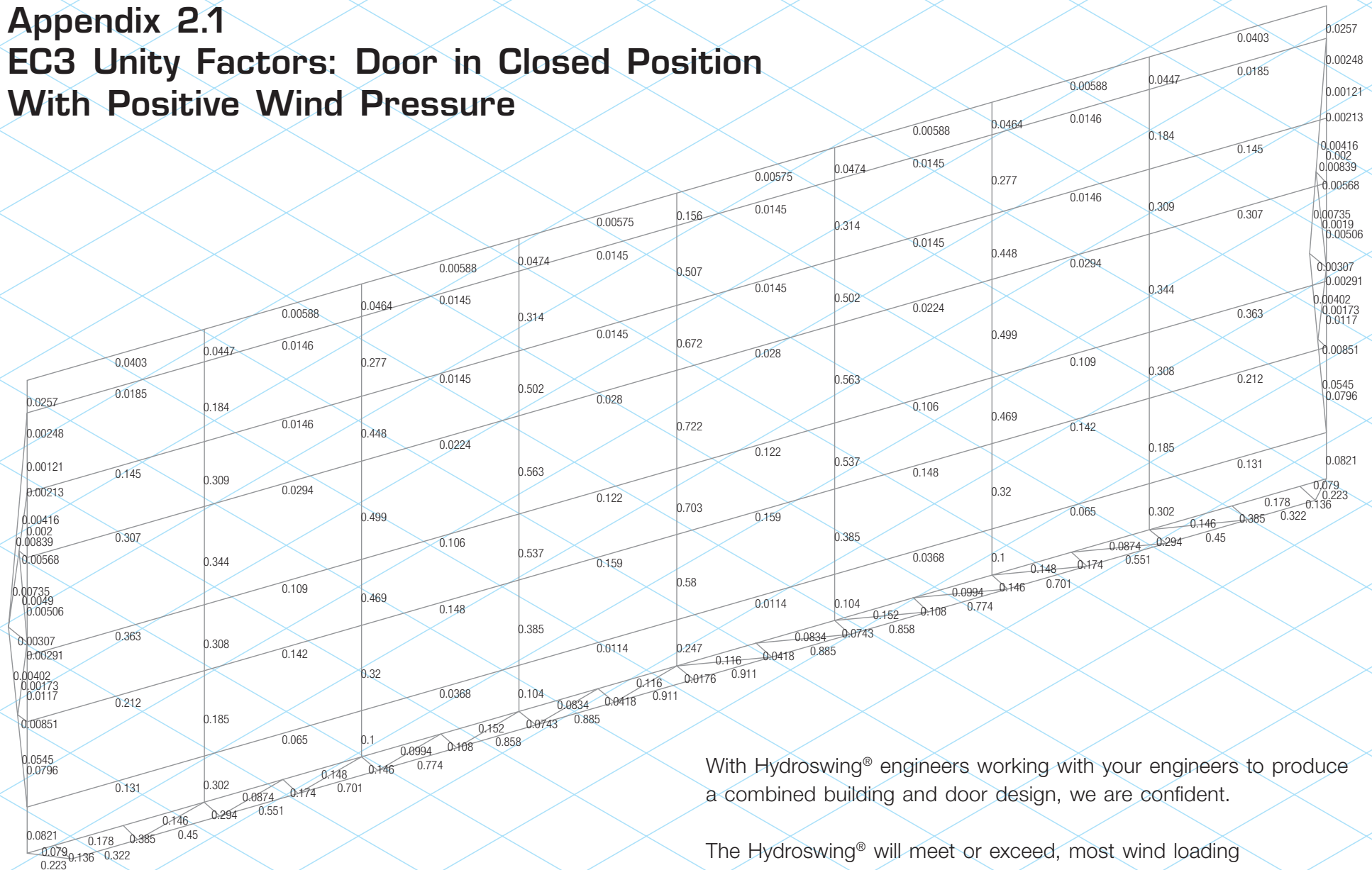
The Hydroswing® can be designed to meet much higher wind loads if required.

Using our structural modeling techniques each element of the door can be adjusted to meet very high performance requirements.

In the example below the customer required the Hydroswing to operate in extreme condition (100 mph — 10 minute mean windspeed in the open position).

# Appendix 2.1

## EC3 Unity Factors: Door in Closed Position With Positive Wind Pressure



The Hydroswing® engineering team assessed each element of the door, made some adjustments and met the requirement.

With Hydroswing® engineers working with your engineers to produce a combined building and door design, we are confident.

The Hydroswing® will meet or exceed, most wind loading requirements.

Please contact us to discuss your specific requirement and an example of a full engineering report can be provided.

