

IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Upper Stages, Space Transfer, Entry & Landing Systems (3)

Author: Mr. Jan Willem Jodehl

Delft Aerospace Rocket Engineering (DARE), The Netherlands, janwillemjodehl@gmail.com

Mr. Lars Pepermans

The Netherlands, lpepermans@outlook.com

Mr. Niklas Emil Knöll

Delft Aerospace Rocket Engineering (DARE), The Netherlands, niklasknoell99@gmail.com

Mr. Mohamed Sahir Sujahudeen

Delft Aerospace Rocket Engineering (DARE), The Netherlands, sujahudeen.sahir@gmail.com

Mr. Sabin-Viorel Anton

Delft Aerospace Rocket Engineering (DARE), The Netherlands, sabinanton@gmail.com

Mr. Marek Homola

Delft Aerospace Rocket Engineering (DARE), The Netherlands, mhomola.mail@gmail.com

Ms. Esmée Menting

Delft University of Technology (TU Delft), The Netherlands, esmee.menting@gmail.com

Mr. Thomas Bosboom

Delft Aerospace Rocket Engineering (DARE), The Netherlands, thomasbosboom@hotmail.com

Mr. Ondřej Dvořák

Delft Aerospace Rocket Engineering (DARE), Czech Republic, ondrej.dvorak144@gmail.com

Mrs. Sowndariya Dhiyaneeswaran

Delft Aerospace Rocket Engineering (DARE), The Netherlands, sowndariyad@gmail.com

Mr. Thomas Britting

Delft Aerospace Rocket Engineering (DARE), The Netherlands, thomasbritting8@gmail.com

ARCHITECTURES FOR PARACHUTE TESTING

Abstract

Parachute testing is available in numerous shapes and forms, while each of them is suitable for different applications. This paper aims to provide an overview of the various testing methods and discuss the advantages and disadvantages they bring. The paper first identifies the relevant parameters for parachute tests and matches these to the various testing methods.

The particular testing architectures that are elaborated on in this writing are the wind tunnel testing, the drop testing from different drop platforms, the re-entry capsules from sounding rockets, and the dedicated sounding rocket missions.

The paper focuses primarily on the European test market and capabilities and aims to identify the various testing methods for companies and teams with limited resources, including student teams such as Delft Aerospace Rocket Engineering.