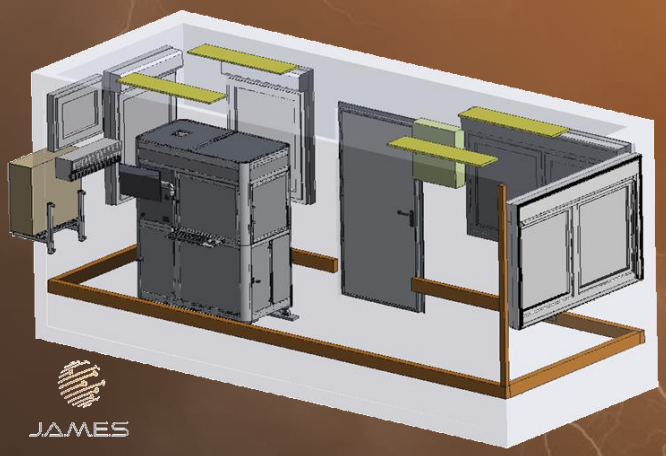
J.A.M.E.S

FundAMEntal

Basic Lab-Infrastructure
for 3D-Printer installation



LabContainer

Infrastructure
NNDM DragonFly IV

J.A.M.E.S LabContainer

Introduction of this FundAMEntal infrastructure:

To work with a 3D-printer machine to realize new 3D-structures and AME-Designs requires different Laboratory preparations you have to take care about.

- Needs of the printer for proper and safe working
    - Technical infrastructure requirements by printer manufacturers
- Safety at work issues, in order to create a proper working environment
- Flexibility needs as reasons for a container decision
- External environmental conditions which a LabContainer has to handle

Since 2020 the J.A.M.E.S Team decided to create a 3D-Printer Laboratory Infrastructure in a flexible but optimized Container.
Two Types of Containers have been manufactured, which fit the technical needs and J.A.M.E.S is collecting 24/7 experiences in doing additively manufacturing electronics with a new MultiJet-Printer System (Dragonfly IV by Nano Dimension).

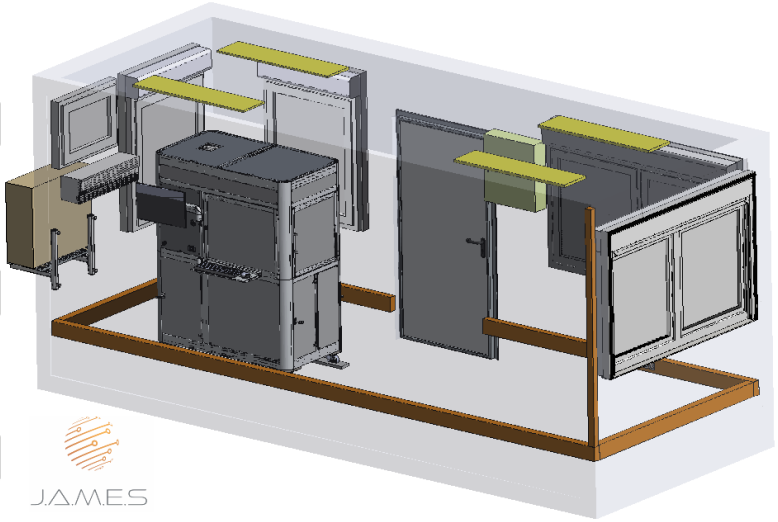


Figure 1: Inside view of the first LabContainer (spatial element) at J.A.M.E.S

1. Requirements to a Container Installation

1.1 Container Types

20’ Container spatial element or ship container (commercially available)

1.2 Container Ground Foundation

With respect to printer site preparation guidelines the ground foundation of the container can be adapted flexible to the needs of stability and vibration reduction.

1.3 Container Windows

Flexible implementation of windows in different sizes

1.4 Container Entrance

Flexible implementation of entry door in different sizes and security installations

1.5 Container Floor covering

Selectable

1.6 Container Electrical Installation

- External Interfaces of the container
- Internals electrical distribution with electric control box (circuit breaker, protective switch, socket strips etc.)

1.7 Container Air-Conditioning System

Selectable

1.8 Container Color Coating

Selectable

Figure 2: Delivery of the two J.A.M.E.S LabContainers (spatial element and ship container type)

If you are interested in your own installation of a LabContainer you can contact J.A.M.E.S for further information, documentation, and experience.

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