

	Document type:	Date: 02.11.2021
	<b>Technical Guideline</b>	Page 1 of 9

Title:	<b>Transport</b>
Purpose:	This document is a Technical Guideline for transport and delivery to GSI/FAIR
Organisational unit:	Logistics
Valid for:	GSI and Project "FAIR Accelerator and Experiments"
Key performance indicators:	

**Document history:**

Version	Created, Date	Reason for modification
V002	M. Cabioch, 02.11.2021	New template, update of outdated information

## Table of Contents

1. Scope.....	3
2. Definitions .....	3
3. General information.....	3
4. Standard transports to the company.....	3
4.1. Definition of standard transport:.....	3
5. Delivery of components by vehicles which are not in accordance with 4.1.....	4
5.1. Access to the company.....	4
5.2. Unloading.....	4
5.3. Additional requirements for NON Standard transports to the Company (Large / Heavy Items).....	5
6. Unloading and transport to a storage yard of the Company (unfavored strategy): .....	5
7. Transport to the final installation location at the construction site of the Company (favored strategy): .....	6
8. Standard delivery of components by the supplier to FAIR shall be done on pallets (lift slabs) .....	6
8.1. Pallets .....	6
8.2. Boxes, containers (wooden, cardboard, ...).....	7
8.3. Weather Protection.....	8
8.4. Damage Protection.....	8
8.5. Waste Disposal of Package Material .....	8
9. Documentation and Labelling .....	9
9.1. Documentation .....	9
9.2. Labelling.....	9
9.3. Location of Labelling.....	9
10. Applicable Documents .....	9

	Document type:	Date: 02.11.2021
	<b>Technical Guideline</b>	Page 3 of 9

## 1. Scope

This Technical Guideline is valid for all transports from the manufacturer to the Company.

## 2. Definitions

Company	The GSI GmbH or the FAIR GmbH
Contractor	The provider in case of an in-kind contribution (IKC) or a commercial company identified by the tendering process

## 3. General information

All transports of components to be delivered by the Contractor to the Company have to be free of charge for the Company. All transport costs, including taxes, customs clearance, shipping (air, land, sea) have to be fully covered by the Contractor.

Transport, delivery and unloading has to be organized by the Contractor in close cooperation with the Company. The Company will not be liable for additional costs (e.g. time delay, missing tools or missing infrastructure...) resulting from transports not approved in advance by the Company.

The Contractor takes responsibility for any damage caused by inappropriate packaging and transportation. Damaged goods will be rejected by the Company. In the case that a damage of goods is observed, the Company will immediately inform the supplier of the observed damage. The Contractor will decide if a repair on site (Company) will be carried out or if the damaged good will be shipped back to the Contractor or manufacturer.

The Contractor has to cover the full costs of repair, shipping, second delivery.

All packaging (e.g. pallets, boxes, support structures etc.) shall be provided by the Contractor free of charge. After installation of the component delivered, the removal of the packaging material has to be organized by the Contractor.

The Contractor has to cover the full costs of the removal.

## 4. Standard transports to the company

### 4.1. Definition of standard transport:

The dimensions of trucks and trailers used for the delivery of components to the Company have to be in accordance with EU and German standards:

	Document type:	Date: 02.11.2021
	<b>Technical Guideline</b>	Page 4 of 9

Straßenverkehrs-Zulassungs-Ordnung (StVZO)  
 § 32 Abmessungen von Fahrzeugen und Fahrzeugkombinationen  
[http://www.gesetze-im-internet.de/stvzo\\_2012/\\_32.html](http://www.gesetze-im-internet.de/stvzo_2012/_32.html)

Straßenverkehrs-Zulassungs-Ordnung (StVZO)  
 § 34 Achslast und Gesamtgewicht  
[http://www.gesetze-im-internet.de/stvzo\\_2012/\\_34.html](http://www.gesetze-im-internet.de/stvzo_2012/_34.html)

Maximum dimensions of trucks and trailers:

- Overall length: 18.75m
- Maximum width: 2.55m
- Maximum height: 4.0m
- Maximum overall weight: 40.0t

The Contractor is responsible of the compliance with the national and international transport regulations

Traffic ways, unloading bays, access to unloading areas / buildings at Company site are designed for Vehicles which are in accordance with 4.1

## **5. Delivery of components by vehicles which are not in accordance with 4.1**

Delivery of components by vehicles which are not in accordance with 4.1 has to be planned in close collaboration with the Company. The Contractor has to cover all costs of the non-standard transport. The transport organization plan has to be prepared by the Contractor and to be approved by the Company. Deliveries of components or goods within the scope of 5 which are not officially approved by the Company in advance (before the start of the transport) will not be accepted by the Company and will be rejected at the full expenses of the Contractor.

### **5.1. Access to the company**

The Contractor is responsible for the complete organization and logistics of non-standard transports. The Contractor is responsible for the planning, construction, reconstruction of all modifications to traffic ways, accesses, and buildings at the Company site which are necessary due to the non-standard transport.

The Contractor has to cover the complete costs of 5.1.

### **5.2. Unloading**

If unloading of non standard transports at the Company site is not possible by the existing infrastructure of the Company, the Contractor is responsible for the complete organization, logistics and implementation (e.g., additional mobile crane, Fork lifter, special tools).

The Contractor has to cover the complete costs of 5.2.

	Document type:	Date: 02.11.2021
	<b>Technical Guideline</b>	Page 5 of 9

### 5.3. Additional requirements for NON Standard transports to the Company (Large / Heavy Items)

For all components or items which have dimensions or weights exceeding dimensions and weights described in 4. the following regulations are valid:

The Contractor has to ensure that the component delivered can be transported and installed at the Companies construction site. To ensure the compatibility of a large or heavy component with the Company infrastructure, buildings, ways of transport, a detailed planning in close collaboration with the Company is mandatory. Depending on the special design of the component, it might be necessary to start this planning already in the design and construction phase.

For each component which cannot be handled on pallets, a detailed planning for the transport to the Company, unloading at the construction site, transport at the construction site and installation has to be performed.

This includes a complete collision check (ways of transport, building constraints, conflicts with other installations) performed by the Company. The approval after this collision by the Company is one precondition for each delivery or transport to the construction site or at the construction site.

### 6. Unloading and transport to a storage yard of the Company (unfavored strategy):

The Contractor has to announce the delivery of a large and heavy component to the Company at latest 20 working days in advance.

This application has to contain the full technical documentation, including:

- i. geometrical size / dimensions, weight
- ii. handling instructions
- iii. unloading instructions
- iv. statement if support (infrastructure, manpower) by the Company is demanded
- v. In case of iv = "YES": list of tools, infrastructure, manpower request (costs have to be covered by Contractor),
- vi. time schedule / project plan,
- vii. tools which will be delivered for unloading and handling together with the component,

The Company will confirm or refuse the application and provide the following informations:

- i. place for unloading (hall, construction site, ...)
- ii. date of delivery

- iii. place for storage (if needed or requested)
- iv. Company infrastructure which can be provided (tools, manpower)
- v. special unloading and handling tools which have to remain at the Company together with the delivered component
- vi. quotation for the costs to be covered by the Contractor: storage costs (warehouse charges), tools, manpower

## **7. Transport to the final installation location at the construction site of the Company (favored strategy):**

The Contractor has to announce the transport from the unloading area or storage yard to the installation location at latest 30 working days prior to transport.

This application has to contain the full technical documentation, including:

- i. statement if support (infrastructure, manpower) by the Company is demanded
- ii. in case of i = "YES": list of tools, infrastructure, manpower request (costs have to be covered by Contractor)
- iii. time schedule / project plan

The Company will confirm or refuse the application and provide the following information :

- i. location of unloading or storage yard (building, construction side, ...)
- ii. date of transport to final installation location
- iii. way of transport to the installation location (building)
- iv. the Company infrastructure which can be provided (tools, manpower)
- v. quotation for the costs to be covered by the Contractor: storage costs (warehouse charges), tools, manpower

## **8. Standard delivery of components by the supplier to FAIR shall be done on pallets (lift slabs)**

### **8.1. Pallets**

Size according to German and EU standards:

EUR-Pallet	
EUR-1	
Size	800 x 1200mm
Load bearing capacity	1500kg
Technical standards	UIC-data sheet 435-2 Standard of quality for EUR flat pallets made of wood measuring 800 mm x 1200 mm (EUR-1)
EUR-2 / EUR-3	
Size	1200 x 1000mm, 1000 x 1200mm
Load bearing capacity	1500kg
Technical standards	UIC-data sheet 435-5 Standard of quality for a EUR flat pallet made of wood and measuring 1 200 mm x 1 000 mm (EUR-2) and 1 000 mm x 1 200 mm (EUR-3)

Wooden packaging /pallets have to be according to ISPM15 (International Standards for Phytosanitary Measures).

## 8.2. Boxes, containers (wooden, cardboard, ...)

Boxes have to be fixed to Pallets according to 8.1.

Size	Maximum base size according to pallet size 8.1
Maximum height (including pallet)	2000mm
Maximum weight (including pallet)	1500kg

Wooden boxes have to be closed by cross-head screws (Philips screws) or Torxx screws to allow repeatedly access to the packed items

Wooden packaging has to be according to ISPM15 (International Standards for Phytosanitary Measures)

The delivery of components exceeding dimensions and weights according to 8.1 or 8.2 has to be approved in advance by the Company and a detailed transport planning has to be performed.

### **8.3. Weather Protection**

All components packed on pallets or in boxes have to be protected against rain and humidity. Components transported oversea (e.g., inside oversea container) have to be protected against any damage by seawater.

### **8.4. Damage Protection**

All components packed on pallets or in boxes have to be protected against mechanical damage. Especially delicate instruments, components, or parts of components (e.g., accelerator insertions, UHV parts: CF knife edges, ceramic parts, fragile feedthroughs...) have to be additionally protected by appropriate shock absorbing materials.

The use of Shock and Tilt Sensors is recommended.

### **8.5. Waste Disposal of Package Material**

The Contractor is responsible for the waste disposal of the packaging material of the items delivered (after the installation of the component or item). The Contractor has to remove the package material after component / item installation and is obligated to dispose the waste according to German and EU law. If the Company takes over the waste disposal for package material, the Contractor has to cover the cost proportional to the amount of package material waste resulting from the delivered items.

	Document type:	Date: 02.11.2021
	<b>Technical Guideline</b>	Page 9 of 9

## 9. Documentation and Labelling

### 9.1. Documentation

Each item, set of items or single component (on pallet, in box, loose) has to be delivered together with:

- i. complete delivery notes
- ii. bill of material / parts list (if a number of items / components are packed together in one box or on one pallet).

Any component with documents missing will be rejected to the Contractors expense.

### 9.2. Labelling

Each item, set of items or single component (on Pallet, in box, loose) has to be labeled as follows:

- i. name of each single item according to the Companies nomenclature
- ii. name and address of the Contractor including named person to be contacted by the Company in case of observed damage of packed items / components
- iii. weight and size of each single item
- iv. weight and size of package, box, pallet
- v. if special handling is required: safety note, hazard warning, handling note, marking with tilt-watch, shock-watch, "this-side-up", etc.
- vi. labelling with barcode system defined by the Company: code information should contain at least: 9.2 – i, ii, iii.

Labelling has to withstand humidity, moderate rain and direct sunlight.

### 9.3. Location of Labelling

Each item, set of items or single component (on pallet, in box, loose) has to be labeled according 9.2 and General Specification for the FAIR Accelerator Facility Project 7.4.: The packaging of the shipped components has to be marked on two neighboring sides with correspondent CIDs.

## 10. Applicable Documents

- i. C-PB-QMO-DE-3\_4\_12\_Anlieferung\_GSI\_FAIR\_Komponenten
- ii. General Specification for the FAIR Accelerator Facility Project F-GS-PMO-en-General\_Specification