

Trans-Force Ltd.	Project code	Date
Technical requirements		25.11.2009

# **Technical requirements of site preparation for TF-T1 Module**

Project Manager

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Head of technical department

\_\_\_\_\_ /K. Nikitin/

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## 1. Technical specification of TF-T1 module

Height of the module in the up most position	3,5 m
Diameter of the surrounding safety fence	4,4 m
Full weight (without visitors)	1500 kg
Full weight with 5 visitors	2100 kg
Static floor load (without visitors)	98,62 kg/m <sup>2</sup>
Static floor load with 5 visitors	138,07 kg/m <sup>2</sup>
Maximum dynamic floor load with 5 visitors	215 ,20 kg/m <sup>2</sup>
Electric power supply requirements	3-phase, 380 V, 50 Hz, 32 A
Average electric power consumption (operation cost calculation)	Standby mode – 3,3 kW, Operation mode – up to 7,0 kW Maximum (peak) load – up to 11 kW
Session cycle duration	3-6 minutes (adjustable)
Capacity and throughput	5 visitors, up to 60 visitors per hour
Environmental requirements	Operation temperature - +5...35°C; Humidity – 20 - 90% RH; No direct sunlight allowed.
Ventilation and air-conditioning	Air exchange is carried out from the surrounding environment.
Internet connection	- Real internet IP address; - Connection speed at least 256Kbps in both directions; - Wired or wireless Ethernet interface. WiMAX or GSM-GPRS connection is possible upon manufacturer's confirmation.
Staff	1. Operator – one person for start up, operation and shut down of the module. 2. Technician – one person for service, maintenance and troubleshooting. 3. Administrator – one person for periodical control.

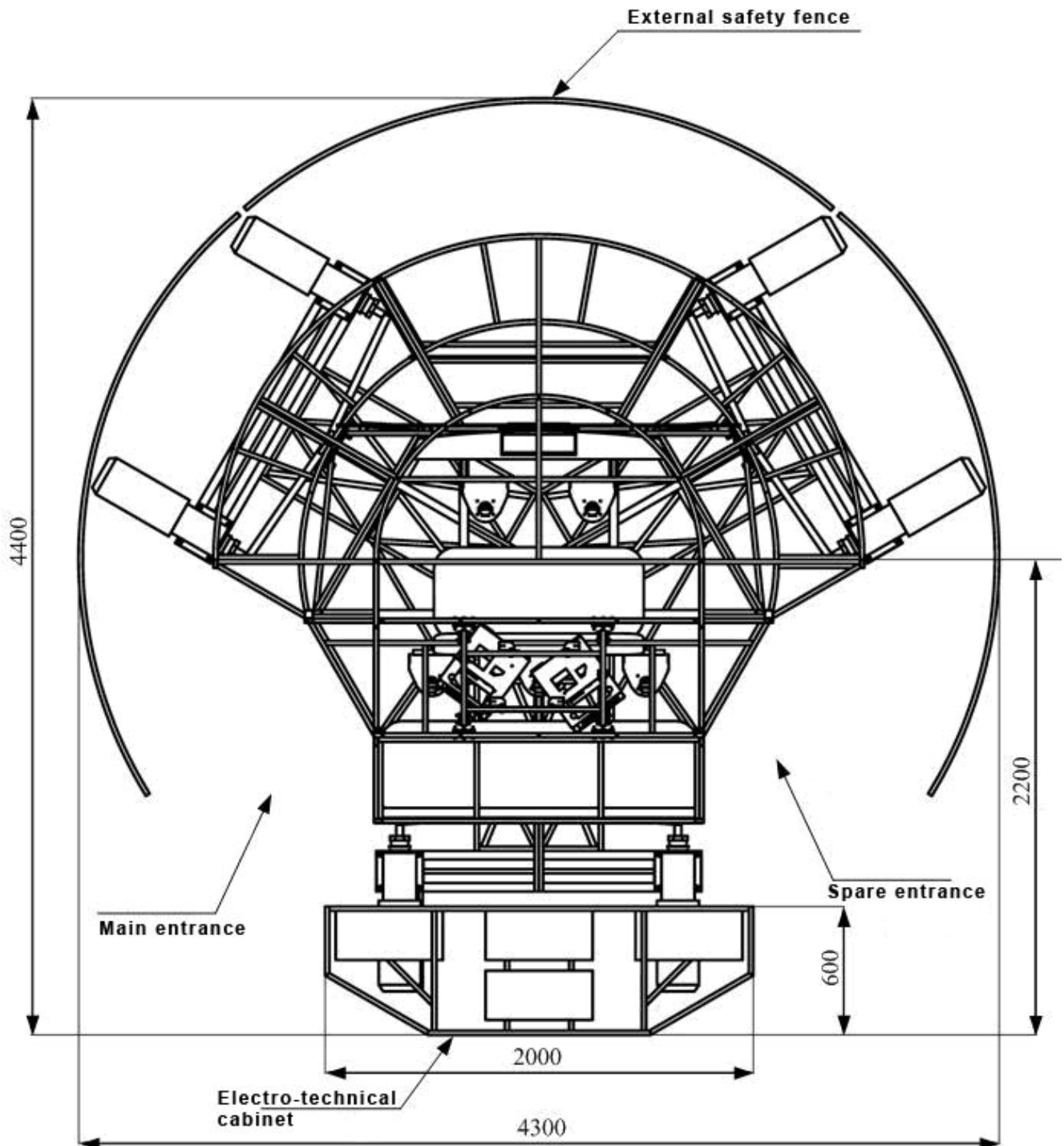
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## 2. Appearance and construction scheme

### Exterior appearance of TF-T1 module



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**Top view**

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### **3. Requirements to the premises**

Before premise preparation it is necessary to think over and define the primary entrance-exit zone of TF-T1 module. The entrance-exit zone is equipped by the touch screen and the bar code reader. TF-T1 module should take places so that from an outer side of electro-technical cabinet there was an easy approach for service of equipment TF-T1 module.

Before TF-T1 module installation the premises should be completely prepared, all building, painting and decorating works should be finished.

The following requirements should be taken in consideration:

- Premise should correspond to dimensions of TF-T1 module (see technical specification).
- Floor should be leveled and correspond to requirements of weight of the module (see technical specification). Decision on building of additional basic couplers or unloading frames is accepted by experts of the Customer depending on a premise.
- Premises should be equipped by the fire alarm system and primary means of firefighting according to requirements for this type of premises.

### **2. Requirements for ventilation and air-conditioning**

Smoking is not recommended due to fire safety reasons. It is necessary to provide air exchange inside the premises for visitors comfort and equipment cooling. TF-T1 module is equipped with several fans to provide fresh air flow inside the cabin and the electro-technical cabinet from the surrounding environment. The temperature and humidity of the premises environment should correspond to the parameters specified in technical specification.

### **3. Requirement for electric power supply**

The power supply required for TF-T1 module is as follows:

- 3 phase, 380V, 50Hz, up to 10kW.
- Separate neutral and ground wires;

Electric power supply cable should be provided to lower section of the electro-technical cabinet of TF-T1 module. It is recommended to implement buried laying or ceiling drop of the cable.

Electric cable installation and connection should be carried out by a person with corresponding qualification (level of access for up to 1000V).

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#### **4. Other requirements**

For remote troubleshooting, software update and license control an internet connection should be provided to TF-T1 module. It is recommended to have unlimited tariff.

Connection requirements are as follows:

- Real internet IP address;
- Connection speed at least 256Kbps in both directions;
- Wired or wireless Ethernet interface.