1 Introduction

HIRT kinetics® were developed and constructed according to the current state of the art and in conformity with the CE directive. The following standards and directives are being observed:

- EN ISO 12100-1 Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology
- EN ISO 12100-2 Safety of machinery — Basic concepts, general principles for design — Part 2: Technical guidelines
- EN ISO 14121-1 Safety of machinery — Risk assessment — Part 1: Principles
- EN 12453: 2000 Safety in use of power operated doors — Requirements
- EN 349 Safety of machinery — Minimum gaps to avoid crushing of parts of the human body
- EN ISO 13849-1 Safety of machinery — Safety-related parts of control systems – Part 1: General principles for design
- EN ISO 13857: 2008 Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs

The stated machine is in conformity with the following European directives:
- 2014/108/EC EMC directive
- 2006/42/EC Machinery directive

The following persons are authorised to operate HIRT kinetics®:
- persons instructed by the manufacturer (hereafter called operators)
- further persons trained by the instructed person acting at their own responsibility.

2 Safety notes

Electromechanically driven components may cause harm to persons and animals as well as damage to property due to improper operation, insufficient maintenance or structural changes.

These risks have been carefully evaluated in a risk analysis. The HIRT kinetics® have been equipped accordingly with the necessary safety installations/equipment.

2.1 Definition of danger zone

The danger zones are located in the utilisation area as well as in the technical facilities room. Both danger zones may not be entered during operation. Prior to operating HIRT kinetics®, the operator must ensure that no persons or animals are located in the danger zone. HIRT kinetics® must not be operated any sooner.

The danger zone denotes the space in direct proximity to the HIRT kinetics® that poses danger for persons and animals.
Danger zone utilisation area:
At a horizontal distance to HIRT kinetics® of 1 metre, inside and outside.

Danger zone technical facilities room:
The area of the technical facilities room inside the safety barrier and the safety door. The operator may only access this area to perform an emergency shut-down.

2.2 Dangers in normal operation
Body parts may be crushed when lowering or raising the HIRT kinetics®. Danger through shearing edges, especially in the threshold area (transition from the floor to the inside and the outside of the descender front) as well as on the inlet profile in the ceiling.

2.3 Dangers through high-voltage current
Electronic components that are connected to a voltage in excess of 50 volts, such as: operating switches, distribution boxes, motors and control units, which generally pose a threat to life and limb. Manipulations that do conform to the prescribed operation are prohibited! Dirt and/or humidity may cause short circuits. Visibly damaged parts must be immediately replaced by the expert. The affected unit(s) must be shut down until completely repaired. Work on electronic components may only be performed while the power supply is shut off.

2.4 Dangers in the technical facilities room
Only authorised persons who are familiar with the operating instructions and the descender fronts may access the danger zone for maintenance and cleaning work. Children are not permitted in the technical facilities room. The access door to the technical facilities room must be kept locked at all times. In the case of stays in the danger zone and work on the HIRT kinetics® or on mechanical components, the main switches of all HIRT kinetics® must be set to OFF in the control cabinet.

Caution: The control unit as well as the motor and other components are powered with 230 volts, 13 amperes.

The circuit is interrupted when the danger zone is entered through the safety door. The safety door is locked when the safety zone is exited. When exiting, make sure that no persons are still located inside the danger zone and that the fastening bolts have been removed. Press the confirm button to confirm that there are no persons still located in the danger zone. Now the descender front can be operated normally again. The operator may only access the danger zone for emergency shut-down (see item 4).

2.5 Warning notices
- It is not permitted to affix any objects such as decoration, shading or pictures, etc. on the inside or on the outside of HIRT kinetics®, as these may hamper free movement.
- HIRT kinetics® must not be used as a lift. Lifting/lowering persons with HIRT kinetics® is strictly prohibited. This may lead to grave injuries or death.
- The thermal circuit breaker may be triggered in case of constant up and down actuation of the key switch/operating panel.
- Manipulations and/or changes to HIRT kinetics® and its components are prohibited.
3 Normal operation

3.1 Prior to operation
Prior to operation, make sure that no objects such as furniture or potted plants hinder the free movement of HIRT kinetics® and that there are no persons and/or animals that are located in the danger zone or that may enter this zone spontaneously. For safety reasons, children and youths below the age of 12, as well as persons who are not able to recognise possible dangers or who are not familiar with these operating instructions, must not operate HIRT kinetics®.

3.2 Operation with visual monitoring (dead man’s control)
For safety reasons, the operator must visually monitor the HIRT kinetics® to be operated during the entire lifting/lowering process. If visual monitoring of the HIRT kinetics® is not ensured or is restricted due to furnishing, lighting conditions, etc., another person must assist the operator.

Opening
For opening, actuate the respective button. When releasing this button, HIRT kinetics® stops immediately in the current position.

Closing
For closing, actuate the respective button. When releasing this button, HIRT kinetics® stops immediately in the current position.

3.3 Fully automatic operation
It is possible to operate HIRT kinetics® fully automatically. The danger spots are monitored by the safety components (see 3.1.3).

3.4 Operating HIRT kinetics® with integrated elements
HIRT kinetics® with an integrated door or similar are monitored electronically in closed position. HIRT kinetics® can only be opened if the integrated elements are closed.

4 Manual closing in case of emergency
If it is not possible to close HIRT kinetics® with the electric motor, for example in case of a power failure or a fault, it may be necessary to close the HIRT kinetics® manually (see operation manual). This kind of manipulation may not be used for temporary operation, for example during the construction phase, but only to close the HIRT kinetics® one time.

5 Airborne noise emission of the machine
The airborne noise emission of HIRT kinetics® is very slight. The sound level is far below 70 dB. HIRT kinetics® therefore do not pose an acoustic hazard. The airborne sound emission is negligible.