

## Frequently Asked Questions

HIRT kinetics® can be found in private houses and business premises all over the world. The perfected production process has had a tremendous impact on increasing the availability of this specialty product and presents HIRT kinetics® as an adaptable solution, where architectural design focuses on the fusion of indoors and outdoors.

### How does HIRT kinetics® work?

Our kinetic elements are not hung. Instead, they stand on a support structure, which in turn is connected to a counterweight. They are moved silently by a small motor, perfectly balanced. Gigantic glass panels appear virtually weightless and retract into the floor, at the click of a button, to create a completely unrestricted, open space. These extremely heavy facades can also disappear, effortlessly, into the floor.

### What is the maximum size of HIRT kinetics®?

The larger, the more impressive. That said, there are technically no limits. HIRT kinetics® is designed to impress. The smaller HIRT kinetics® SF 90 has a max width of 19.5 ft, max height of 19.5 ft, and max surface area of 193 ft<sup>2</sup>. HIRT kinetics® SF XL is virtually unlimited and can reach enormous proportions. It is fascinating that standard components can be inserted up to a surface area of 430 ft<sup>2</sup>. HIRT kinetics® SF Special comes into play for larger-surfaces. The largest descending wall installed to date is 65.5 ft long and weighs 16,534 lb. Larger is always possible, pending engineering review.

### Is HIRT kinetics® reliable?

HIRT moving architecture can easily withstand extreme climatic conditions and has already proved itself under the harshest conditions. HIRT kinetics® is designed to be installed anywhere in the world. It has already been in use for many years in a wide range of different climate zones worldwide. From moderate climates of Central Europe and salty, windy coastal areas to humid tropics or desert areas with extreme temperature changes.

### Is it possible to lower walls or facade panels without glass?

Of course! The principle used for weightlessly lowering the windows works with any conceivable types of structures. Whether constructed in metal, stone, or wood, all types of walls can be lowered effortlessly into the floor. In some instances, the effect is more impressive than with the use of glass panels. Where a solid wall once stood, there is now an impressive opening, extending from wall to wall without any visible limitations.

### Is HIRT kinetics® safe?

Yes. All HIRT kinetics® systems are rigorously built according to EN standards and other safety requirements. Compliance with the machinery directives ensures safe operation.

### Is HIRT kinetics® well insulated?

Yes, very well in fact. Depending on the glass buildup, it is possible to achieve a thermal transmittance (U value) of up to  $U_w 0.75 \text{ W/m}^2\text{K}$  with a thermally broken design.

### What is the maximum glass thickness that can be installed?

For HIRT kinetics® SF 90 model, the maximum glass thickness is 2.5 in, and for HIRT kinetics® SF XL it is 2.75 in.

**What types of glass can be used with HIRT kinetics®?**

Practically all modern, functional glass can be installed, as either triple-glazed, double-glazed or single pane glass. Optionally, special-purpose glass may also be used, for instance, bullet-resistant safety glass.

**Does HIRT kinetics® also offer sun protection?**

Yes. As with normal windows, sun protection may also be used as a standard solution for protection against solar radiation. Glass panes equipped with a sunlight-mitigating coating are possible as well. Shades may also be integrated, as a customized solution, into HIRT kinetics®.

**Can doors also be installed within HIRT kinetics®?**

Yes, both swing doors and sliding doors can be integrated and installed within HIRT kinetics®. This is an option that we highly recommend, because it provides further flexibility of use.

**How is HIRT kinetics® operated with built-in doors?**

HIRT kinetics® with built-in doors is always monitored electronically. This ensures that they can only be operated when the door is locked.

**Is there burglary protection?**

Depending on the design, HIRT kinetics® provide very good protection against burglaries. There is no other possible opening besides lowering the entire element. If doors are integrated into HIRT kinetics®, they can be equipped with systems to protect against break-ins.

**What structural measures have to be planned?**

The mechanical and equipment room in the basement, which is necessary for accommodating the counterweight and serving as a storage area for the lowered panel, must be cast in concrete. The equipment room will also house the control system, motor, drive shaft, compressor, and pneumatic components.

**What has to be taken into consideration when designing the equipment room?**

The size of the equipment depends on the size of HIRT kinetics® and must also account a minimum size for personal safety reasons. The installation documents, system plan, and product details are provided which include the exact project-specific dimensions.

**Does the equipment room have to have a drainage system?**

HIRT kinetics® is equipped with an integrated water gutter. A small amount of water may accumulate there and would have to be redirected to a drain or a pump well.

**What loads should the floor be able to withstand?**

The weight of HIRT kinetics® is generally distributed on the basement ceiling. This load transfer is calculated according to the specific unit. Optionally, the supports can be used to transmit the loads to the floor of the equipment room.

**What does the Electrician have to take care of on site?**

The wiring for the motor, limit switches, control box and other peripheral components of the HIRT kinetics® will be provided, ready for use. The Electrician must only take care of connecting the control system to the home automation system.

**Is it possible to close HIRT kinetics® during a power outage?**

Yes, the emergency manual override works, even without electricity.

**During what phase of construction should HIRT kinetics® be installed?**

HIRT kinetics® is installed after the building shell is completed. The building shell should be completed to ensure that the equipment is protected against weather influences and any dirt and debris that may result from construction work.

**When is the glass installed?**

The glass panels are installed during the assembly of HIRT kinetics®. After the completion of installation, the glass is checked and protected on site.

**How is HIRT kinetics® operated?**

HIRT kinetics® is operated using a key switch or a maintained contact switch with a dead man's control. Alternatively, a fully automatic control system is possible, where the operation of the descending wall can be controlled via tablet or touchscreen.

**Is the mechanical system protected against sand and salt air in marine environments?**

The electronics are protected by a closed control box. The mechanical system is comprised of high-quality components, such as sealed ball bearings and special coating to prevent corrosion.

**How often does HIRT kinetics® require maintenance?**

A periodical inspection is recommended every two years. For units that are frequently opened and closed, annual inspection is recommended. In addition, remote maintenance is also possible. The system can be remotely accessed for software updates and for evaluating issues, if necessary.