

HIRT MOVING
ARCHITECTURE



HIRT kinetics® SF 90, SF XL, SF Special



Range of application

With the click of a button, HIRT kinetics® silently descends and opens the room in an unrivaled manner. It is the ideal solution, for areas where the interior and exterior can be combined: living area, pool house, garage or dining area. HIRT kinetics® is used as a heat insulating element in the building envelope and is available in three designs: HIRT kinetics® SF 90, HIRT kinetics® SF XL and HIRT kinetics® SF Special.

HIRT kinetics® SF 90 is suitable for a wide range of applications, for areas such as living rooms, pool and spa, dining, etc.

Max dimensions of HIRT kinetics® SF 90: Width max. 19.7 ft, height max. 19.7 ft, area max. 190 ft², weight max. 3,300 lb.

HIRT kinetics® SF XL: The SF XL is virtually unlimited and provides endless possibilities. It is fascinating that standard components can be inserted up to a surface area of 430 ft² (the SF Special allows for even larger surfaces).

HIRT kinetics® SF Special: The largest descending wall to date is 66 ft long and weighs 16,500 lb. Larger units are possible. Contact HIRT moving architecture for any inquiries.



The special design: Structural Glazing

The outside level provides a flush glass envelope. The glass panels are installed with the frames concealed and project clean modern lines.

Function

The descending wall and counterweight will be suspended weight-neutral by chains from the basement ceiling. The load transfer is made through defined suspension points in the basement ceiling. The electro-mechanical drive and the counterweight can be arranged on the inside or outside. HIRT kinetics® is guided via runner rails and can be placed as an individual system in the wall soffit, or several SF XLs can be installed in series. **Designs without posts are possible if several SF XLs are placed in a series.**

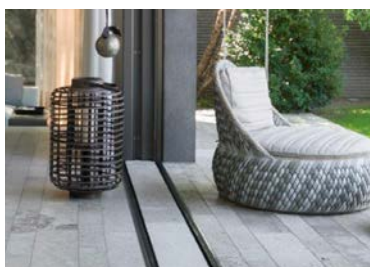
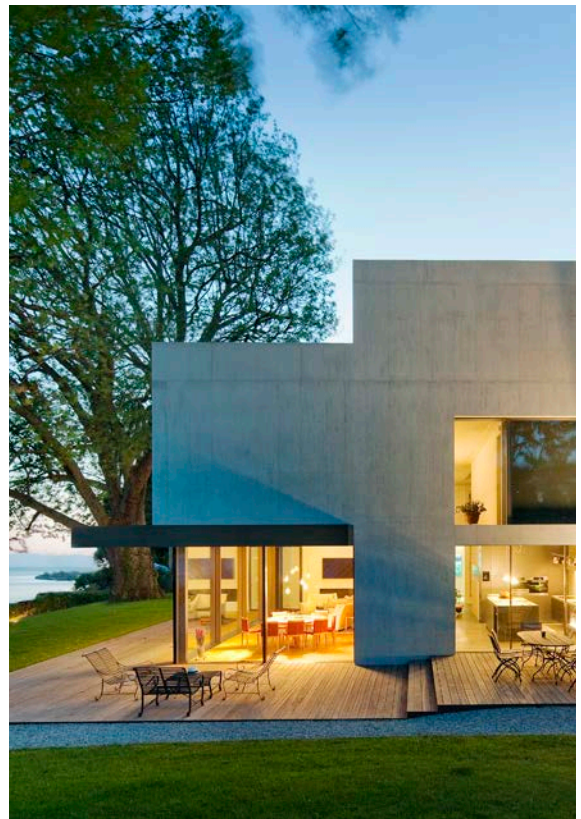
Safe in accordance with EN: The descending walls comply with strict EN and other standards.

Drive/control: The operation is provided by an electro-mechanic drive. The inner cabling of motors, limit switch, control box and other components will be included in the delivery, ready-for-use. The control unit connection to the grid needs to be provided by a Licensed Electrician at the construction site in accordance with the applicable standards. Upon request, the microprocessor control unit (PLC) can be modified to the project specific requirements,.

Manual operation: HIRT kinetics® can easily be manually operated—which can be useful in the event of a power outage. Since the panels are balanced by counterweights, manual operation does not require a great deal of force.

The technology space: Space is required in the basement as the parking space for the opened descending wall and housing of the counterweight. This technology space also houses the motor, the drive shaft, the compressor and the pneumatics. The spatial design requirements can be found in the system plan. A drainage or a pump must be installed to redirect any water that may be collected in the groove of the descending wall.

Maintenance: For many years, descending walls have demonstrated their benefits in innumerable projects even under very challenging conditions. Thanks to high-quality components and Swiss quality, faults or even failures are basically impossible. Periodic inspections are recommended and offered, which usually take place every two years. In addition, remote maintenance is also possible.

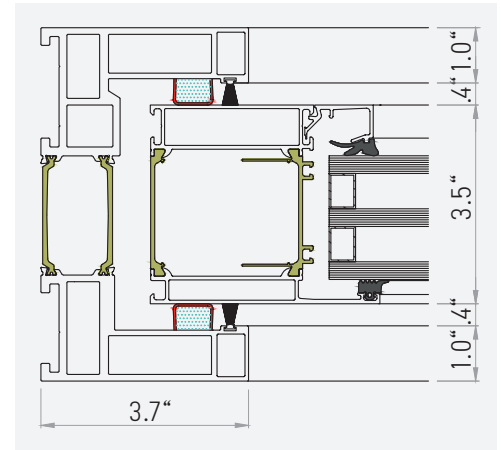


Elegance with invisible threshold

This threshold provides safety and comfort while remaining aesthetically pleasing. It is completely flush, barrier-free, accessible, and durable. The standard sill is stainless steel while invisible sill materials such as wood, tile, or stone can be used as an option.



HIRT kinetics® SF 90

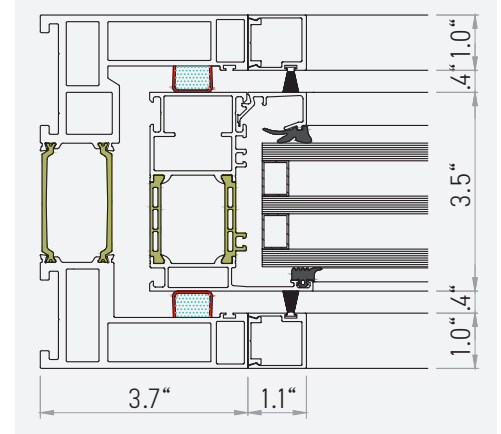


Construction/profile system

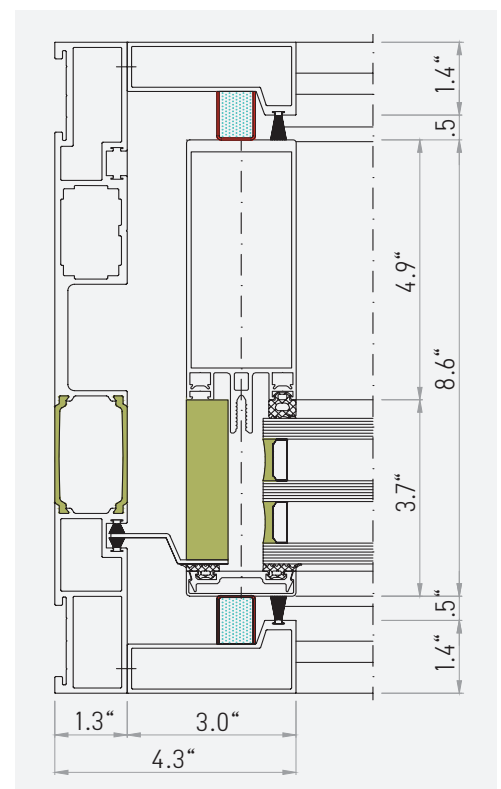
The HIRT kinetics® SF 90 descending wall with thermally broken aluminum profiles. The framing is 6.25 in deep and 3.5 in wide. The corners are cut in 45° miters and assembled with vapor-tight corner braces. Different types of glazing and panels can be installed. Doors can be integrated, and the fixtures are adapted to the customization.

Proven and tested post and latching systems are installed in the HIRT kinetics® SF XL. Based on the project and static requirements, the inner supporting structure can be constructed using steel, chrome nickel steel or even aluminum. The construction depth of the inner supporting structure is normally 5 in, the visible width varies between 2 in and 2.375 in. Aluminum clamping cover strips are used on the outside. A variety of glass types can be used. Doors can be integrated and the fixtures are adapted to the customization.

Flush glass



HIRT kinetics® SF XL

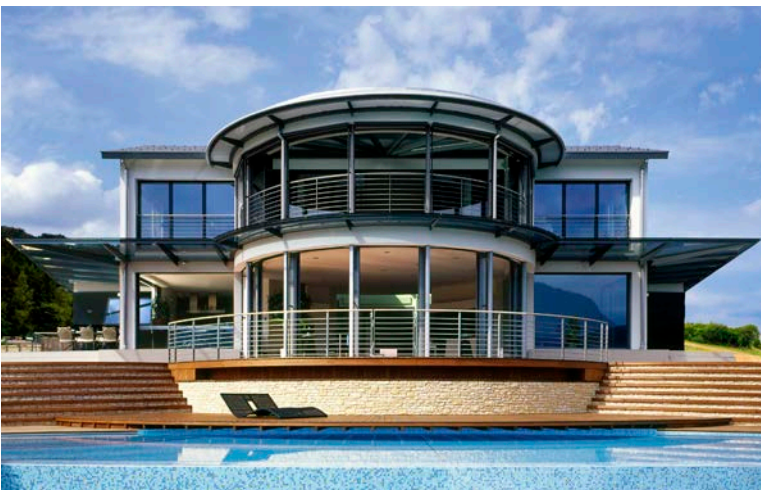




HIRT kinetics® SF Special: Unlimited possibilities for customized solutions

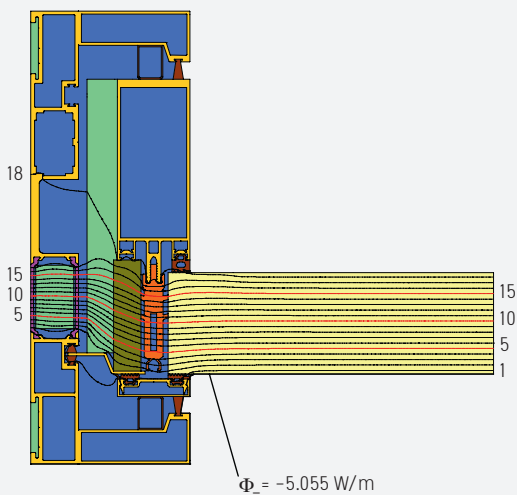
HIRT kinetics® works with all types of facades, including glass, metal, stone, and wood. A massive area of wall silently opens up without any visible constraints.

Various customizations are available such as curved descending walls, horizontal sliding door integration, swing door integration, descending walls with different materials, etc. The descending walls can be installed to be flush with the building structure. Contact HIRT moving architecture to further discuss customized solutions.



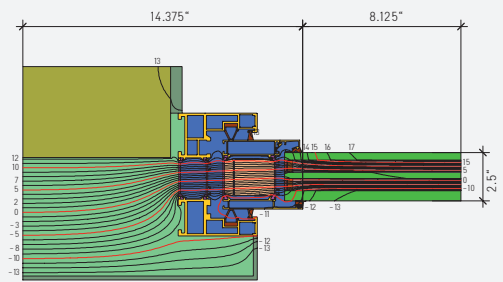


Isothermal progression SF XL



$U_f = 0.25$
 $U_n = 0.09$

Isothermal progression SF 90



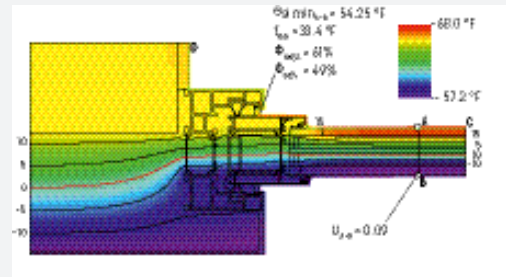
Absolutely tight Due to the use of four tightening levels, pneumatic seals provide complete air tightness. The inner seal is used as a standard. Sophisticated press and labyrinth seals on the outside provide draft-free comfort. The seals are automatically inflated through a control pulse. Brush seals remove coarse dirt and provide an aesthetically pleasing transition from the frame to the panel. A hot air duct can be installed into the floor to compensate for the missing heat reflection by the glass.

Construction physics

Air permeability in accordance with EN1026/EN12207	Class 4
Resistance to wind loads in accordance with EN12211/EN12210	Class C4
Rain impermeability in accordance with EN1027/EN12208	Class E1500

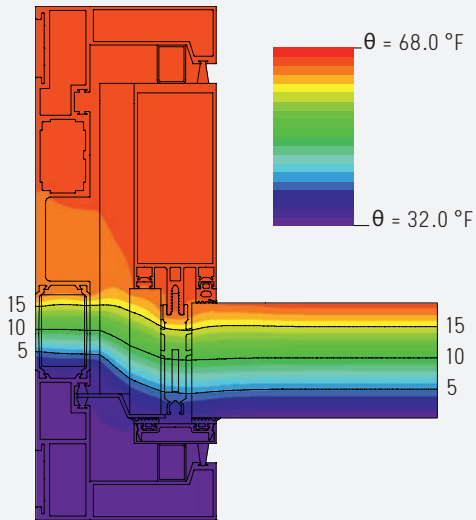
Best heat insulation: HIRT kinetics® SF 90, SF XL, and SF Special are highly energy efficient. Some major features include improved thermal properties and efficient air circulation. Depending on the glass, it is possible to achieve a thermal transmittance (U value) of up to 0.13.

Temperature progression SF 90

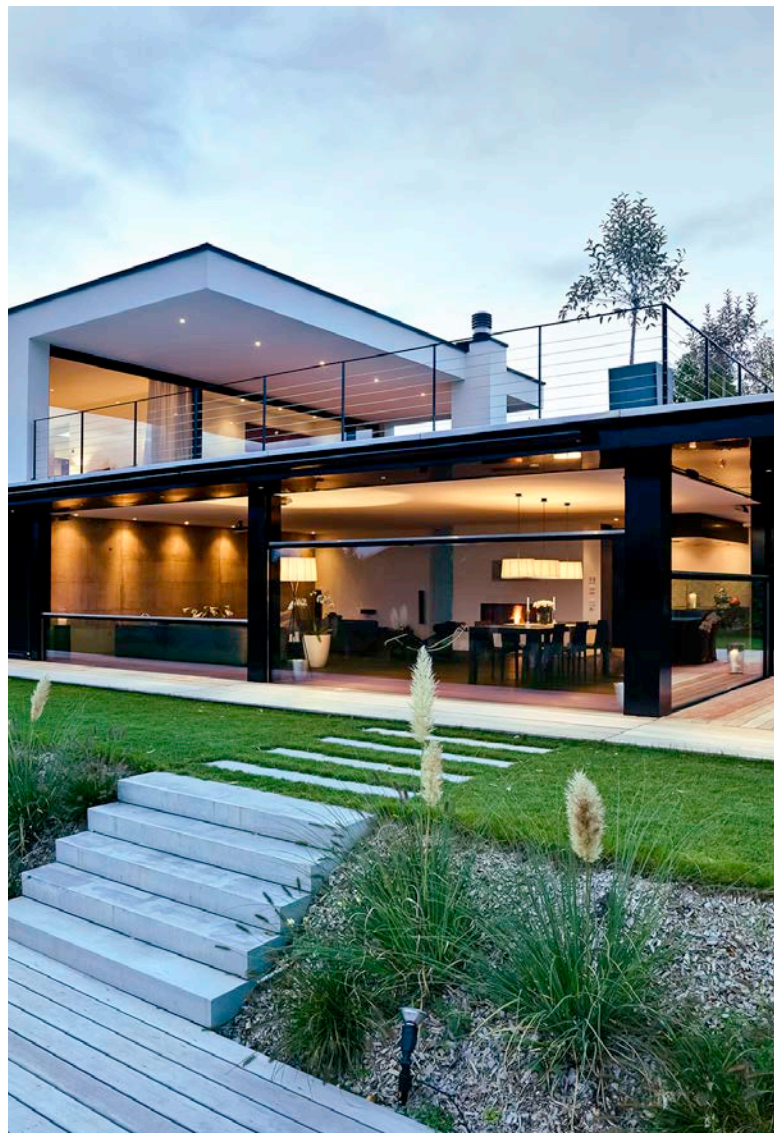


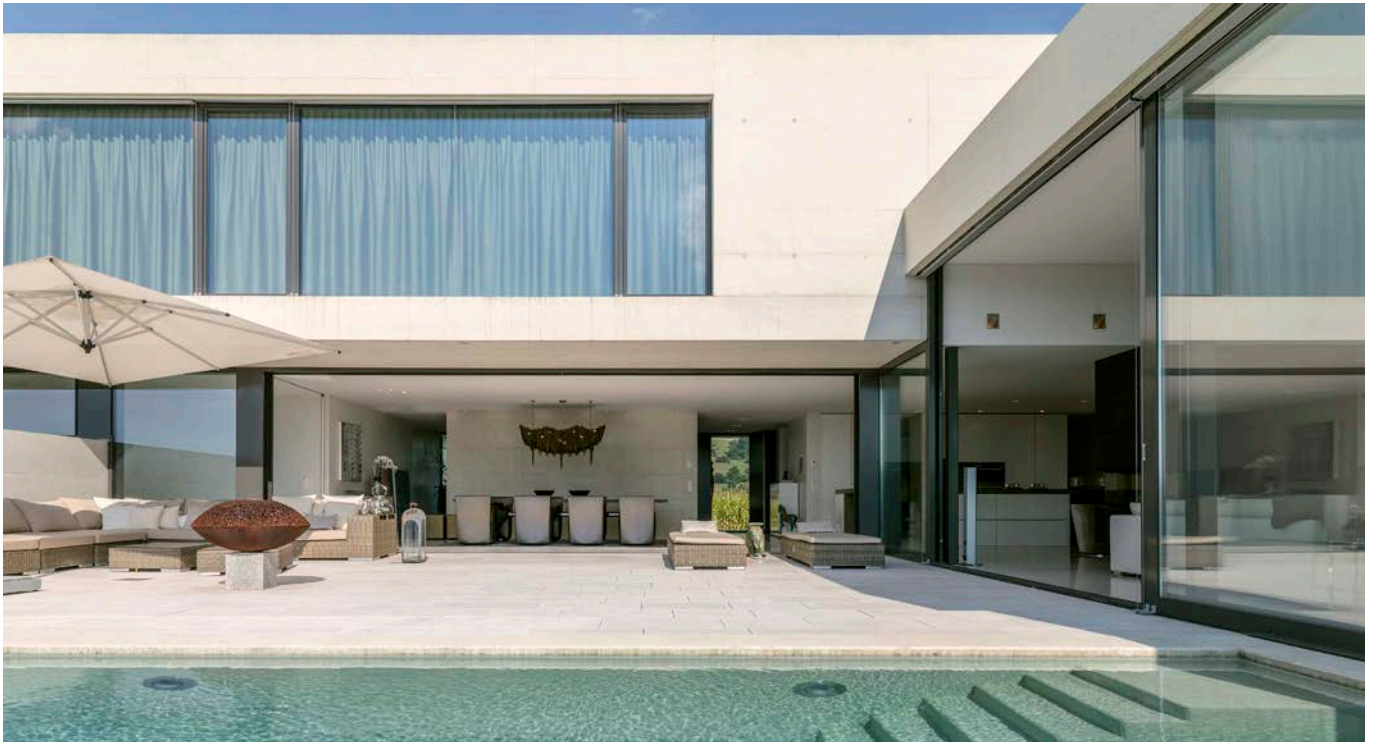
HIRT kinetics® SF 90: The thermally broken aluminum profiles provide 2.125 in of insulation and a U_f value of 0.24. Glass panels up to max 2.5 in can be installed.

Temperature progression SF XL



HIRT kinetics® SF XL: The thermally broken aluminum profiles provide 2.125 in of insulation and a U_f value of 0.25. Glass panels up to a max of 2.75 in can be installed.





Comparison of the HIRT kinetics® SF 90, SF XL and SF Special

	SF 90	SF XL	SF Special
Max. height	19 ft	19 ft	Unlimited
Max. width	19 ft	39 ft	Unlimited
Max. area	190 ft ²	430 ft ²	Unlimited
Max. weight	3,300 lb	7,700 lb	Unlimited
Suitable for	Indoors and outdoors, living room, pool, spa, event spaces	Indoors and outdoors, living room, pool, spa, event spaces	Residential, commercial and public buildings
Postless version	No	Yes	Yes
Building depth mounting frame	6 in	12 in	Upon outcome
Threshold	3.5 in wide, stainless steel. Invisible sill option with wood, stone or other materials is possible.	8.6 in wide, thermally broken clear anodized aluminum profile. Invisible sill option with wood, stone or other materials is possible	Upon request
Curved	No	No	Yes
Door installation included	Yes	Yes	Yes
Corner solution	Yes (short side length max. 3 ft)	Yes	Yes
Flush-mounted glass	Yes (with additional profile)	Yes	Yes

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