Thermal barrier from top to bottom with automated sliding door record THERMCORD^3

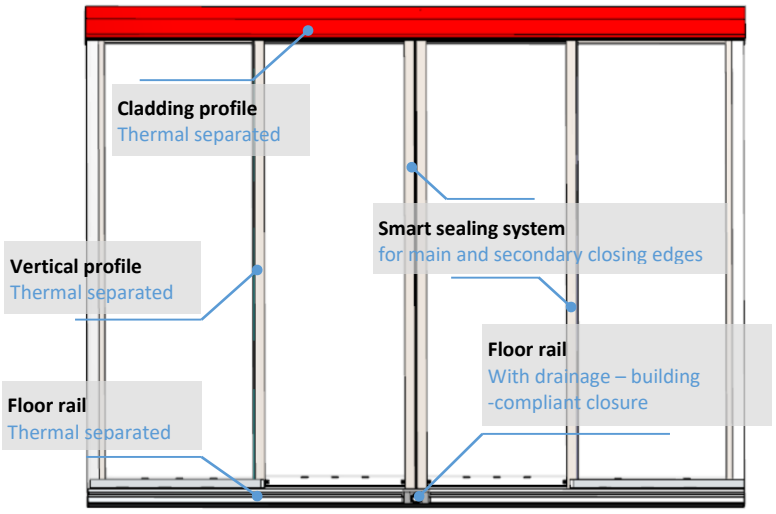
The awareness of dealing responsibly with natural resources should always be reflected in the requirements for buildings and their elements such as windows and doors, as this will lead to an improvement in indoor climate and a reduction in energy costs.

1 Revolutionary record THERMCORD3 door system with completely thermally broken profiles and compliant building connection profile

Heat loss via walls and doors is no longer necessary and can be efficiently minimised by the THERMCORD3 automatic door system with complete thermal break from the panel to the profile system and the thermally broken floor rail in the longitudinal axis. The following video provides a brief and concise insight into THERMCORD technology:

https://youtu.be/loTRlYbLtFA

THERMCORD^3 – Thermal separation three times.



Today, thermally separated automatic sliding doors are "state of the art", but must also have a conforming building closure according to the state of the art, e.g. RAL. Further leading information on the subject of state-of-the-art building closure can be found under ISBN: 978-3-00-045381-6. With a compliant building closure, the complete closure of the building structure is made possible and thus the risk of moisture and dampness damaging the building structure is minimised. Furthermore, THERMCORD^3 is characterised by impressive values with regard to insulation, air impermeability and driving rain density, as attested by the independent institute ift Rosenheim.

2 Munich Re study and the influence of climate on building damage

In a study, Munich Re shows the connections between damage to buildings caused by weather disasters. Conclusion: we must expect more heavy rainfall in the future. Automatic sliding doors with floor-rail drainage are therefore also becoming increasingly important.

Research assumes that climate change is largely human-induced and it influences weather extremes such as storms, hail, heavy rain or heat waves, because the "weather engine" runs faster: more water evaporates from warmer seas. A warmer atmosphere can also absorb more water, and both these factors increase the potential for heavy precipitation.

However, the relationship is extremely complex: natural climate fluctuations have a major, and so far a much greater, influence on weather disasters and the susceptibility of buildings or infrastructure to damage.

Further information on the topic "Influence of weather disasters and their impact on building damage", compiled by Munich Re, can be found at the following link:

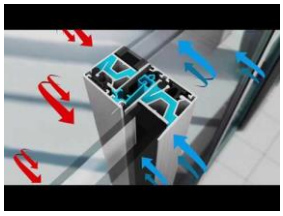
https://www.munichre.com/topics-online/de/climate-change-and-natural-disasters/climate-change/what-do-we-know-about-climate-change.html

3 record THERMCORD³: Smart Sealing System – a class of its own!

record THERMCORD³ is the only automatic sliding door that offers complete thermal break from the front panel to the vertical profiles and the floor track with drainage.

The smart sealing system was not developed by chance, but is fully engineered and offers various advantages, which are positively reflected in the various product properties.

The video offers an insight into the product characteristics and their advantages «Revolutionary door system – thermal barrier from top to bottom»

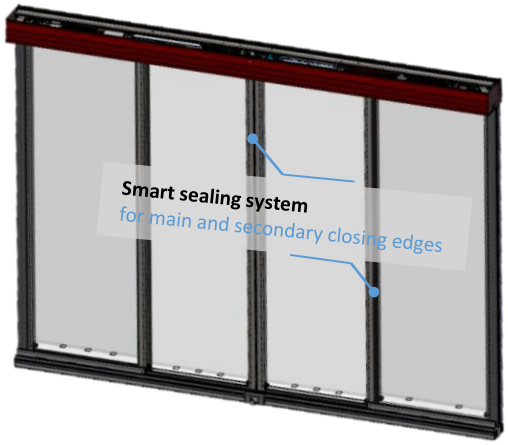


Intelligent design – outstanding advantages

- Weather resistant door
- Tighter than ever, improved air tightness improves indoor climate and energy efficiency
- Certified watertightness to driving rain even at high air pressures
- Withstands extreme wind loads
- Tested soundproofing according to SSK 1
- Energy-saving door with low U-value complies with EnEV 2016

3.1 THERMCORD³ – Air permeability

Air permeability is the property of a door system to reduce unwanted air exchange between two environments with different temperatures. The higher the test pressure value with low air permeability, the better.



Thanks not least to the smart and sophisticated sealing system, the record THERMCORD³ achieves a 50% improvement with 30% higher test pressure in terms of air permeability compared to its predecessor.

Which corresponds to class PPD (3/3/600)

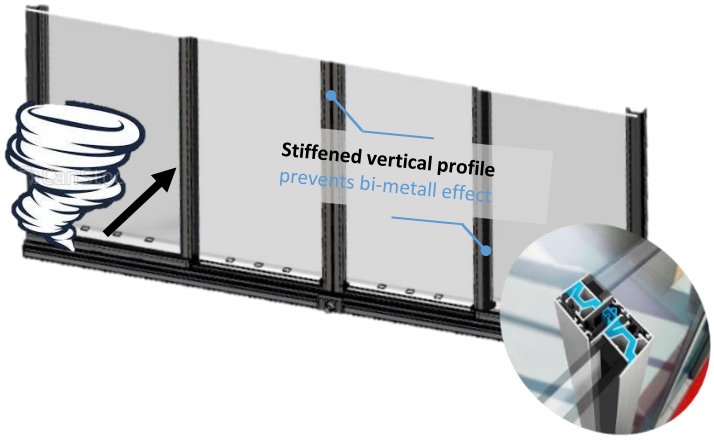
Legende:	PPD Powered Pedestrian Door
1. Value	Length-related air permeability
2. Value	Area-related air permeability
3. Value	Test pressure

Whatever happens outside - inside a constant and pleasant climate without draughts.

3.2 THERMCORD³ – Resistance to wind load

Resistance to wind load is the property of a closed door system to withstand the load applied by the wind in the environment in which it is installed. The higher the test pressure value, the better the wind load resistance.

The longitudinal profiles and vertical profiles installed in the door leaves have an enormous rigidity due to their structure-reinforced double V shape. The outer and inner profiles are decoupled from each other, but connected by an elastic foam. This means that the movement of the door remains largely unaffected by suction and pressure under high wind loads. This rigidity also leads to a reduction in the gap (no bi-metal effect), so that the THERMCORD³ is superior to conventional designs in terms of avoiding draughts.



record THERMCORD³ functions reliably even under enormous loads of 600 N/m² = 110 km/h.

Legende:	PPD Powered Pedestrian Door
	Class PPD (600) A
	Class PPD (400) B
	Class PPD 2C

To subject the entire door system to a stress test, a safety test was carried out beyond the highest category of 600 Pa already achieved. The safety test was carried out with double the test pressure of the highest category (1270 Pa) and passed. Here 1270 Pa corresponds to a wind load of 150 km/h.

3.3 THERMCORD³ – Watertightness against driving rain

This door system is effectively equipped not only to be windproof, but also to effectively stop heavy rain with an intensity far above the maximum tested category E 600 = 600 Pa = 60 kg.

The record THERMCORD³ thus offers effective building protection, especially for the entrance area, and protects it effectively against weather damage.

In addition, the floor track offers an integrated solution to meet the need for a building-compliant closure for sealing against the outside.

3.4 THERMCORD³ – Sound insulation better than ever before

The thermal break is used as an acoustic break in the record THERMCORD³ and therefore has sound-insulating properties. This is why it also achieves excellent sound insulation results, as a skilful interplay of the various components, such as the elastic foam in the vertical profile and the intelligent sealing system with additional brushes, comes into play.

The sound insulation results Rw = - 35 dB of record THERMCORD³ comply with sound insulation class 1 (SSK 1) in accordance with DIN 4109 and offer sound insulation which, at up to - 35 dB, makes a major contribution to a more pleasant room climate.

Silence, when you need silence.

3.5 THERMCORD³ – energy efficient according EnEV 2016

Thanks to the holistic, thermally separated overall concept and the unique sealing system with brush technology, THERMCORD technology contributes to improved energy efficiency, resulting in a heat transfer coefficient U_D value of 1.1 reflects.

Better energy efficiency thanks to thermally separated overall system.

4 record THERMCORD³ tested to the extremes

Nothing was left to chance in the further development of THERMCORD technology, and so the product properties „Air permeability“, „Resistance to wind load“, „Watertightness against driving rain“, „Direct airborne sound reduction“ and „Heat transmission coefficient“ on the test bench and were tested to the extreme. More details in the video Test to its extreme: https://youtu.be/I6HGIWOYopQ

The results are unparalleled and united in the product record THERMCORD³.

5 record THERMCORD³ – Product properties in a nut shell

record THERMCORD³ product properties tested and certified by ift Rosenheim			
Air permeability		PPD (3/3/600)	Less draught: tight when it has to be tight 50% improvement with 30% higher test pressure
Resistance to wind load		PPD (600) A, PPD (400) B, PPD2 C	Works reliably even under enormous loads Stays dry even in hurricane force (110 km/h)
Resistance to wind load Safety Check		1270 Pa	Increased safety even at wind speeds of 150 km/h. Safety test beyond the highest category of 600 Pa
Watertightness against driving rain		E 600	Outstanding impermeability to driving rain E 600 Pa thanks to intelligent sealing system and floor rail with drainage
Direct airborne sound reduction index		RW = 35 dB	Sound insulation class 1 (DIN 4109), A major contribution to a more pleasant indoor climate
Heat transmission coefficient		U_D =1.1 W/m²K	Energy efficient according EnEV 2016
Building compliant closure		State of the art	Conforming building closure according to the state of the art with complete closure of the building structure

6 Videos on the topic record THERMCORD3

1. record THERMCORD3 – automatic sliding door system with thermal insulation properties and a complete thermal separated building connection profile https://youtu.be/loTRlYbLtFA
2. record THERMCORD3: Thermal barrier from top to bottom https://youtu.be/nArYUgNvIV8
3. Test to its extreme: https://youtu.be/I6HGIWOYopQ