

TECHNOFORM
泰诺风

Standard profiles 2023

门窗幕墙隔热解决方案
Insulation solutions for
windows, doors, and facades.

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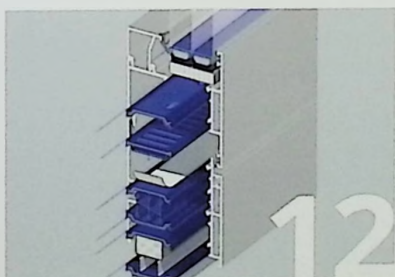
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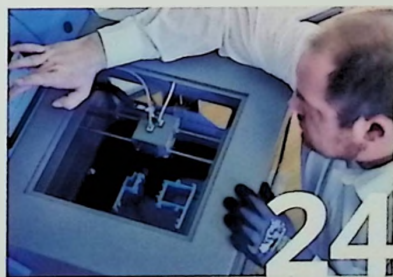
了解泰诺风
Let's talk Technoform



业务范围
What we do



材料与解决方案
Materials and solutions



泰诺风专业知识
Technoform knowledge

您好，我们是泰诺风

Hello, it's us, Technoform

作为家族企业，我们深知任何业务都离不开“人”这一要素。我们始终坚信，只有齐心协力才能激发绝妙创意。泰诺风目前拥有1400名创新人才，致力于为全球客户提供服务，而这个数字还在不断增加。

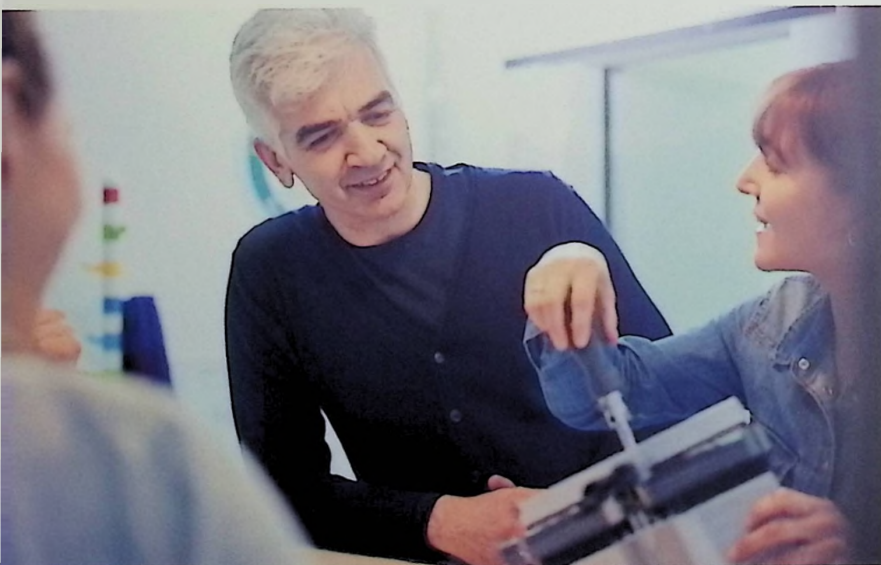
早在1969年创立之初，我们就深谙客户和市场的需求，并在此基础上共同奋斗，开发全球领先的解决方案。我们的高品质服务和解决方案惠及全球，在各方面均做到100%可靠、品质稳定如一。分布于全球四十多个国家的45个办事处，确保无论您身在何处，都能得到不间断的服务。

全面的高精密技术、一千多项技术，我们训练有素的团队将顾客需求转化成专业的定制化解决方案。不论订单是1件还是100万件，我们都力争为客户提供质量、数量、时间、价格于一体的最佳体验。

As a family company, we know that people empower every business. We firmly believe that the best ideas are always born together. We are Technoform – 1,400 and growing, dedicated innovators that work for our customers worldwide.

Understanding what drives customers and markets since 1969, we develop leading solutions collaboratively. Providing 100% reliability and quality on all levels, we offer the same level of high-quality services and solutions all around the world. 45 sites in over 40 countries ensure continuous supply wherever you are.

Performing 360° precision and 1,000+ skills, our highly trained team turns individual needs into tailored technological solutions. Delivering quantities from 1 to 1,000,000, our customers can rely on receiving the best available package of quality, quantity, time, and price.



我们诚邀您浏览本手册，
进一步了解我们将如何助力您的业务发展

We invite you to browse
through this brochure and find
out how we can support your
personal vision.



我们每天的工作？为您寻找各类解决方案 Our everyday business? Finding solutions for you

市场涌现、企业转型、工艺改进，在飞速发展的产业生态中，日新月异的思路和解决方案成为现如今最重要的发展要素。我们在全球范围内充分挖掘人才潜力、点燃人才思维火花，共同应对当今挑战。我们满怀热忱，钻研塑材解决方案。在挤塑成型领域，我们卓尔不群。

独一无二的高精密挤塑工艺，让我们得以生产最复杂的塑料——包括那些一向被视作只适用于注射成型工艺的产品。故此，我们非常自豪能够为顾客提供远超行业平均水平的产品，它们都具有共同特征：极其光滑的表面，独特鲜明的轮廓，最小的公差，最高的精密度，以及一般塑料解决方案难以企及的各类定制化材料属性。一言以蔽之：我们始终致力于为您打造最完美的解决方案。

In a fast-paced industry landscape new ideas and solutions are the currency that matters. Markets emerge, businesses transform, processes change. At Technoform, we unleash the full potential of people and their ideas across a global network to meet today's challenges collaboratively. We are people with a passion for plastics solutions. And in plastics extrusion we excel.

Our unique high-precision extrusion process allows us to form the most complex plastics – including those typically only suitable for injection molding. As a result, we are proud to offer outstanding technical characteristics that go far beyond the ordinary: extremely smooth surfaces, uniquely sharp contours, the lowest tolerances, the highest precision, and various custom material properties you would not usually expect from a plastic solution. In a nutshell: we always look for the perfect solution for you.

放眼四周——我们就在您身边 Take a look around - we are closer than you may think

作为众多行业最值得信赖的合作伙伴及问题解决者，我们提供最全面的技术和最专业的知识：为建筑师、建筑规划师、中空玻璃制造商打造的暖边解决方案，针对铝合金门窗、幕墙的隔热解决方案，针对汽车、航空、电气工程行业的高精度定制设计及系统组件——这些远远不足以囊括我们的所有业务。

Providing holistic knowledge and technical expertise, we are the can-do partner and problem solver for various industries. This spans from thermal edge bond solutions for architects, building planners, and manufacturers of insulating glass units (IGUs), a vast range of insulation solutions for aluminum windows, doors, and facades, to high-precision plastic profile solutions and system components for the automotive, aviation, and electrical engineering industries – just to name a few.



一句“专攻挤塑成型领域”
尚不足以概括泰诺风。

Simply mentioning
that we specialize in
plastic extrusion is
quite understated.

与您携手合作——建立真诚伙伴关系

Your cooperation with us – a true partnership



核心技术 Know-How

我们拥有 50 余年经验，能够在研发高效断桥隔热系统的过程中，与您分享专业的技术信息。

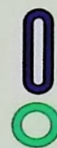
With over 50 years of experience we offer you a vast amount of knowledge and how-to in the development of efficient thermal break systems.



服务 Service

在我们看来，您不仅是客户，更是我们的合作伙伴。因此，我们不断精进自身工艺与服务以满足您的需求。

We don't consider you just a customer but a partner. Therefore, we are constantly improving our processes and services to always fulfil your requirements and meet your needs.



经验 Experience

我们持续关注全球各地的研发进展，为隔热解决方案寻找新的灵感。正因如此，我们才能源源不断地提供满足客户需求的高品质工艺与服务。

We continuously scan what we develop in our global network and find inspiration for innovative insulation solutions. That's why we offer the major variety of products and materials to help our customers to fulfil every markets' request.



研发 Research and Development

作为隔热型材研发的领头羊，我们始终坚持寻找最优质的个性化解决方案。我们在此承诺，我们将为您面临的每一次挑战找到最理想的解决方案。

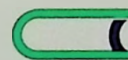
As a pioneer in the development of insulation profiles, we always continue our search for optimized and tailored solutions. Thus, we guarantee you to find the best possible result for every challenge.



质量 Quality

质量是我们的重中之重。基于这一点，我们从 2001 年开始实行 ISO9001 认证和 ATG 认证。得益于规范化的工艺流程，我们的产品可在旗下任何工厂生产制造，且确保品质始终如一。

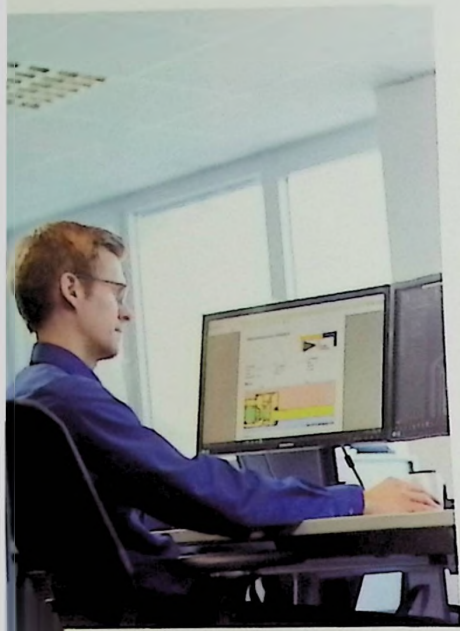
Quality is key for us. That is why we have implemented the ISO 9001 in 2001 as well as the ATG certification. Thanks to the standardization of the processes, our products can be made in any of our production plants with no variation in quality.



参考手册 Reference catalogue

我们拥有全球最齐全的参考目录。在长期合作的过程中，我们制定出了 800 多种标准产品，为您提供多样化的解决方案。

Our reference catalogue is the most comprehensive one worldwide. Thanks to our long-term cooperation, we have developed more than 800 standard references that allow us to offer you multiple solutions.

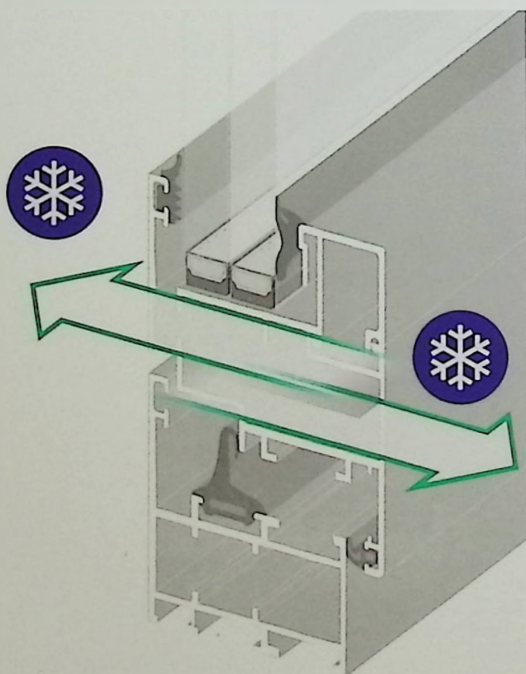


“不同的市场面临着不同的挑战——
我们为各类系统提供
完美契合市场需求的解决方案。”

**“Every market has its own
challenges – and we offer
solutions for systems
that perfectly match
these requirements.”**

设想一种完美契合门窗幕墙系统的材料：稳定性好、无需保养、接近百分之百的可回收率——这正是铝材的特点。但铝材有着一个严重的缺点，即导热性高，导致能量流失。

Just imagine a material perfectly suited for the application in windows, doors, and facade systems. Excellent stability, maintenance-free handling, and almost unlimited recyclability – that’s what aluminum has to offer. And yet there is one severe disadvantage: a high degree of heat conductivity, leading to a great loss of energy.



如果没有断桥隔热技术

如果没有断桥隔热技术，铝在冷热交换中造成大量的热流失。在夏天，外部温度升高，铝型材表面温度增加，并将热量转移到建筑内部，冬天，相对的，宝贵的热量又会流失。

No thermal break

Without a thermal break, aluminum allows a big heat flow, which leads to a huge energy loss. In summer, the frame heats up and transfers the heat to the inside of the building and in winter, precious heat is lost.

是时候革新了 Time for a revolution

如此说来，采用高导热性的铝材做门窗实非明智之举？但我们却把它当作一种挑战，决心进一步优化铝制门窗。因此大约从50年前开始，我们就启动了技术革新：通过采用体积较小的尼龙型材，我们成功阻隔了热量的直接交换。这就是“断桥隔热”技术的诞生。

这种技术的原理在于：采用我们的高精度尼龙型材，隔断铝材原本直接相连的内外两侧部分，利用尼龙型材的低导热性，实现铝材内外侧的断桥隔热。与此同时，我们的隔热型材还有着绝佳稳定性和优异的机械性能。

但我们并未止步于此。我们的目标是：在实现定制设计的同时将U值尽可能压低。详见下页！

Sounds like a bad decision to use the highly conductive aluminum for windows? To us, it sounds like a challenge to optimize its use. Therefore, some 50 years ago we started a technical revolution. By using small polyamide profiles, we stopped the direct heat exchange. Thus, the so-called "thermal break" was created.

But how does it work? By replacing the direct connection of the aluminum elements on the inside and outside with our high precision polyamide profiles. The low heat conductivity leads to the thermal break of the inner and outer parts. At the same time, our insulation profiles guarantee outstanding stability and optimized mechanical performance.

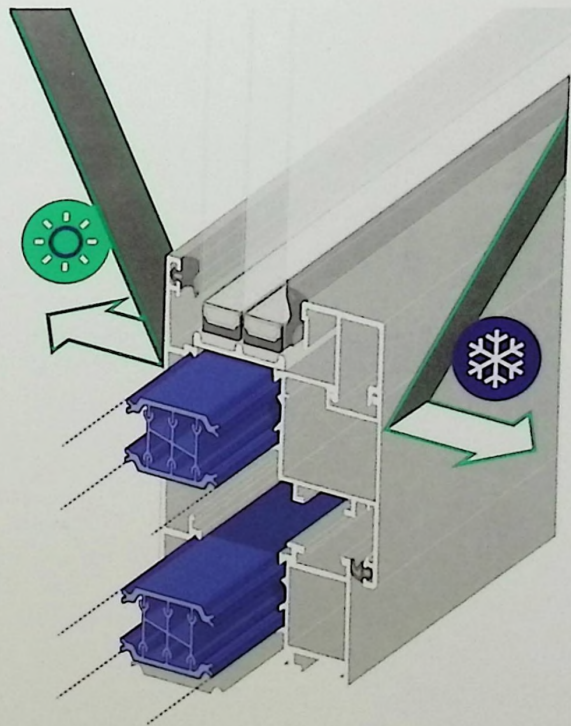
But for us, good is not good enough and we want to take it a step further. Our goal: we want to combine a customized design with the lowest possible U-value. Let the next pages inspire you!

断桥隔热

采用尼龙型材连接铝合金型材，阻断热量的直接传递。如图所示，型材内部的空腔能够最小化对流换热或辐射换热，从而取得最佳效果。

Thermal break

Connecting aluminum profiles to each other with polyamide profiles prevents the direct exchange of heat. Cavities inside the profiles, for example, make it possible to minimize the exchange of convection or radiant heat and to achieve optimum efficiency.



标准还是定制—— 有了我们，您怎么选都没错

Standard or tailored – with us you are always right

我们的核心竞争力? 让您的系统先人一步

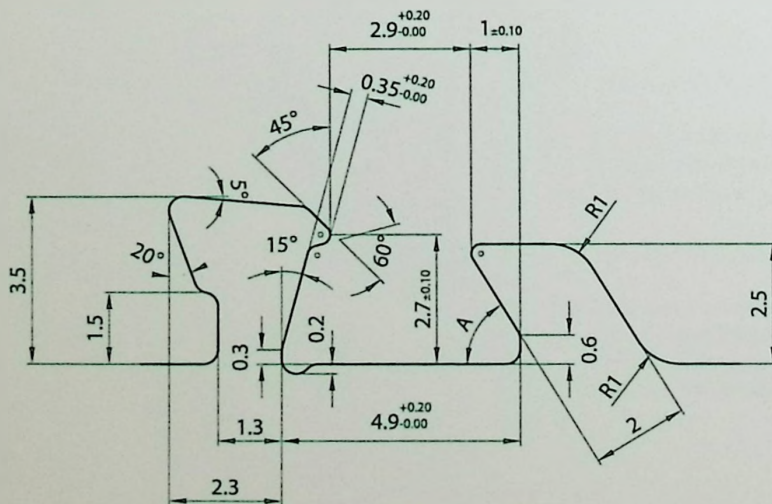
确保“长久可用”是我们工作的核心。50 多年来，我们始终专注于为铝制门窗幕墙打造新型的高精度尼龙隔热型材，不仅有效提升了铝制门窗幕墙的质量和舒适度，还为节约全球能源和减少二氧化碳排放做出了贡献。

为了做到这一点，我们不断钻研，研发出了断桥隔热技术。客户的满意是我们追求的重点，为此我们针对不同的市场和需求，提供了 800 多种可行方案。不论您处在何地，不论您需求多大、要求多高，我们的高品质、高效率都能满足您。全球 14 个生产点及 45 个办事处，确保我们始终在您左右。

Our core competence? Making your system future-ready

Ensuring sustainability is at the heart of what we do. For over 50 years, we have set our focus on creating our innovative, high-precision polyamide-based insulation profiles for aluminum windows, doors, and facades. Thus, we have helped improve quality and comfort, while delivering energy savings and reducing CO₂ emissions worldwide.

To achieve this, we have dedicated our work to create the so-called thermal break. Since customer satisfaction is of great importance to us, we offer more than 800 freely available geometries for various markets and needs. You can always rely on high quality solutions and a rapid supply in any length and quantity you need – wherever you are. 14 global production sites and 45 sales offices around the world make sure we are always near you.



半径° = R0.2 | 其他: R0.3
角 A: 58.6° 生产时最大值: 60°

Radii ° = R0,2 | Others = R0,3
Angle A = 58,6 for production max. 60

泰诺风 标准铝材槽口

得益于日积月累的专业知识和专业技术，我们开发出了一种经济、精确的方法，用以提供各类标准解决方案。这里所说的精确，是指精密的计算、正确的角度判定，以及对产品尺寸的模拟。我们所做的一切，都是为了满足您的需求。

Technoform aluminum standard groove

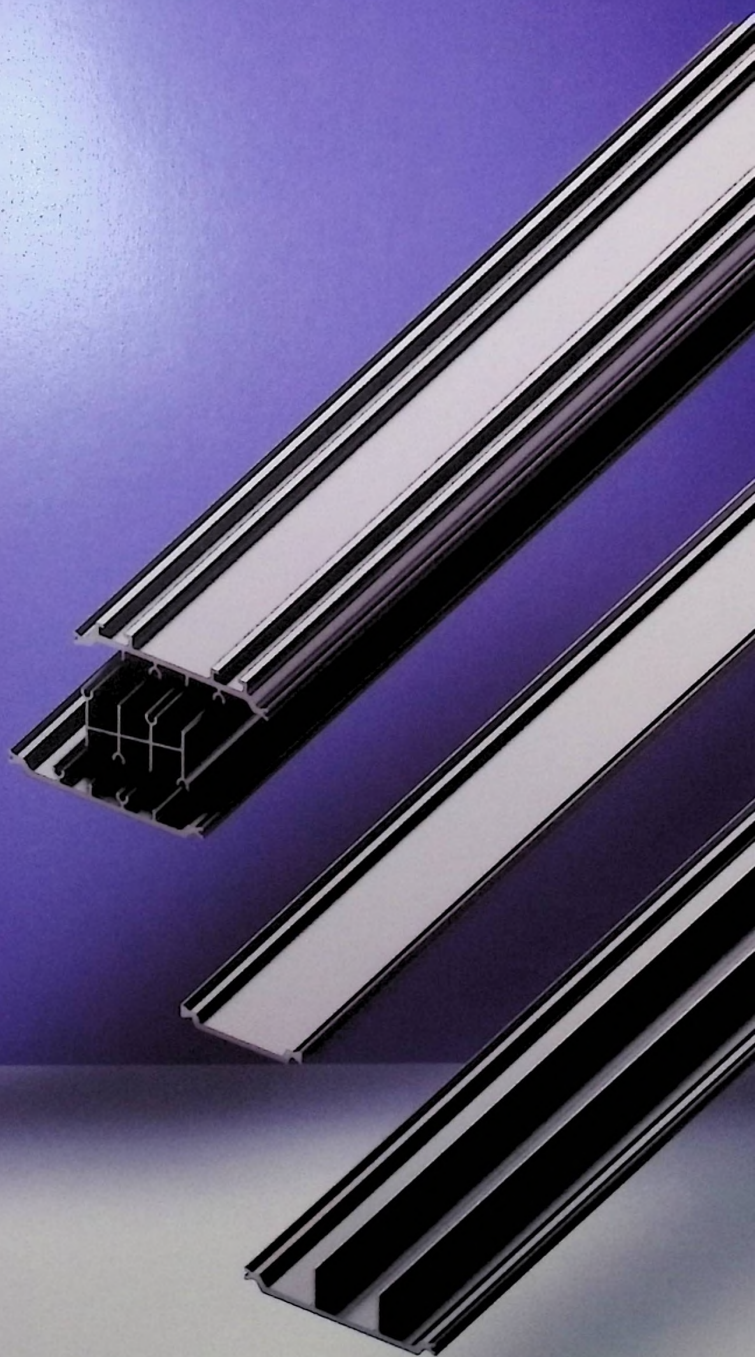
Thanks to our long-standing expertise we have developed a cost-efficient and precise way to offer a great variety of standard solutions. And yes, when we talk about precision we mean exact calculation, determination of the correct angle and simulation of the product size. Everything that is required to match your needs.

特殊需求? 没问题, 我们为您提供定制解决方案

需要更灵活的解决方案? 身处极具挑战性的境地, 需要特殊调整? 作为您的合作伙伴, 我们时为您提供帮助! 得益于顾客与泰诺风之间建立起的信任与沟通关系, 我们将根据您的生活需求, 定制专属的隔热解决方案。

A specific request? No problem, we can find a tailored solution

You need greater flexibility, or do you have a challenging situation where special adjustments are needed? Then we are your can-do partner to offer you help right away! Our tailored profiles are developed for exclusive use according to your specific requirements from the close development partnership we enjoy with each customer.



我们不断前行，
寻找更完美的隔热方案。

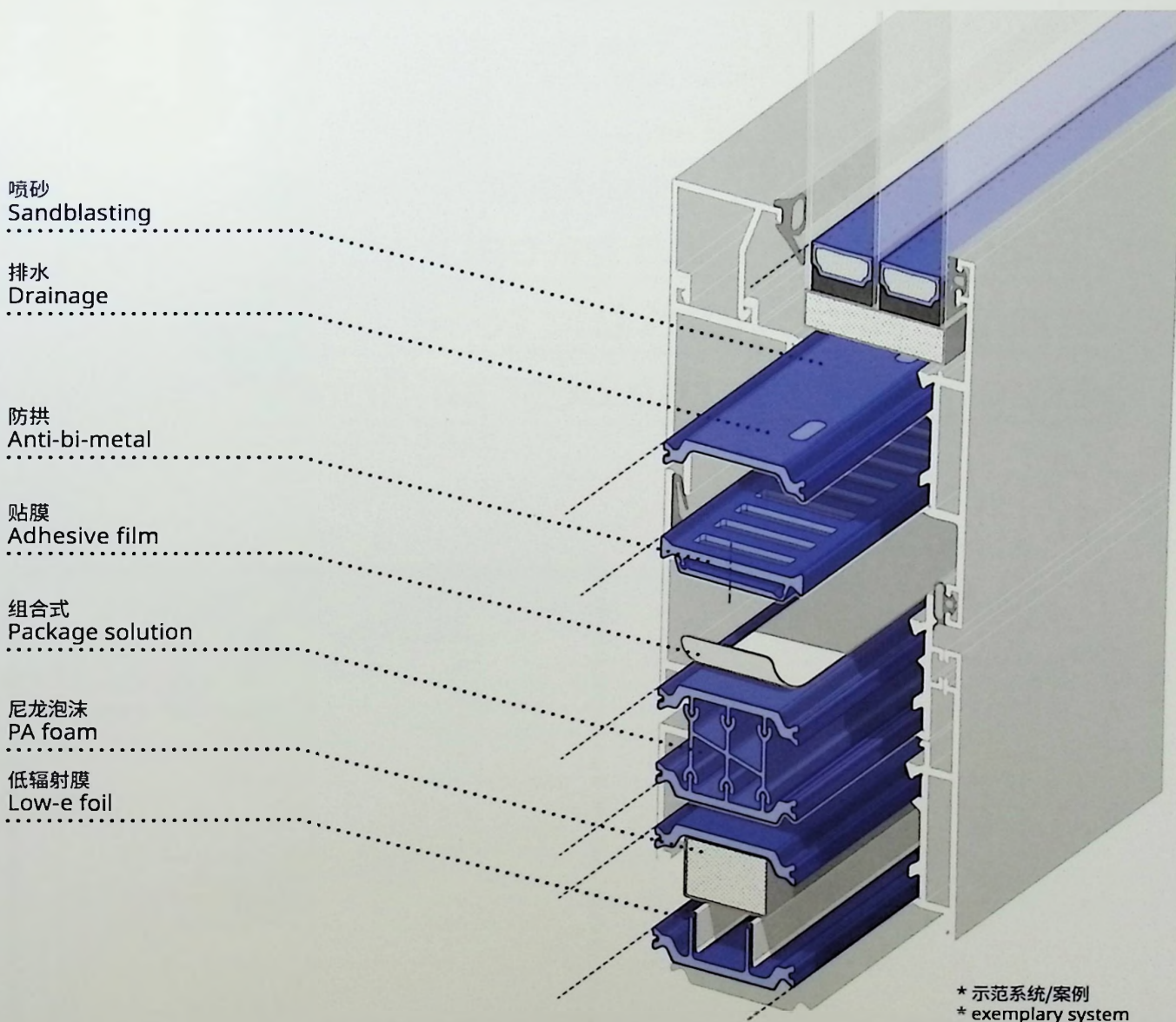
When it comes to
thermal insulation, we
always look for the next
level of excellence.

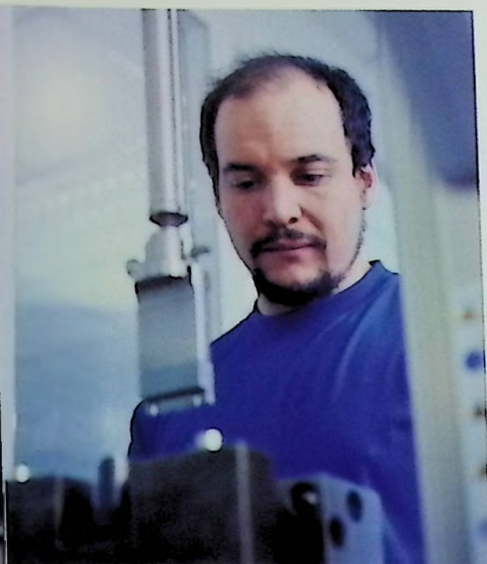
轻松了解断桥隔热技术

Your easy access to understanding thermal break

断桥隔热技术难以理解？我们可以助您一臂之力。为了让您更好地了解我们的职责所在，我们选取了一个典型示范系统，以展示泰诺风解决方案如何融入各类系统，解决了一个又一个极具挑战的问题。

Solutions for thermal break look like rocket science to you? To help you understand what we can do for you, we provide you with an exemplary illustration of how to integrate most of our solutions into systems to solve challenging requirements. Step by step we will explain the different parts and options to you.





为了尽可能创造低 U 值，我们一直在挖掘门窗幕墙系统优化的潜能。隔断门窗中的铝制部分只是第一步，热辐射和热对流问题仍然是现今隔热面临的重大挑战。优化隔热区域是最大限度提升能量利用效率的关键。而我们通过采用带空腔或 T 型（带内鳍）的标准型材，减少空气对流和能量散失，实现了隔热区域的优化。

但我们仍不满足—我们的三种特殊解决方案可以进一步优化隔热区域。

In the search for the lowest possible U-value, there is often potential for improvement in window, door, and facade systems. Separating the aluminum parts in windows is the beginning of the journey, but radiation and convection still present significant challenges to insulation. Optimization of the insulation zone is the key for highest energy efficiency. This could be achieved through using one of our standard profiles with hollow chambers or fins (noses) to reduce air flow and energy loss.

When good is not enough, one of our three special approaches can further optimize the insulation zone.

“任何系统都可以优化——

而我们拥有模具和经验，足以提供最佳解决方案。”

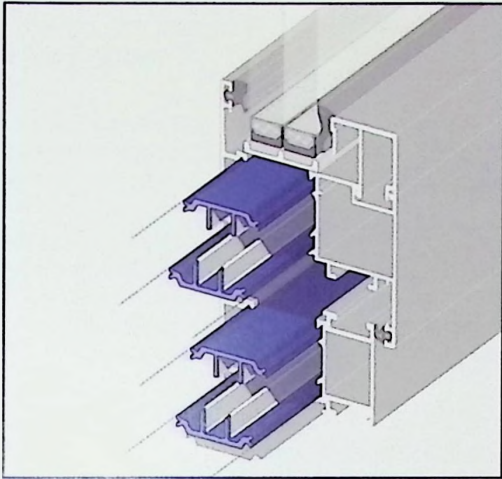
**“Every system can be optimized –
and we have both the tools and the
experience for the best solution.”**

实现最佳性能的三种解决方案

我们拥有三种隔热优化方案，从生产、结构、环境三方面入手，全面考虑您的需求。让我们与您携手，寻找解决方案的最佳组合，助您实现目标。

Three approaches for best performance

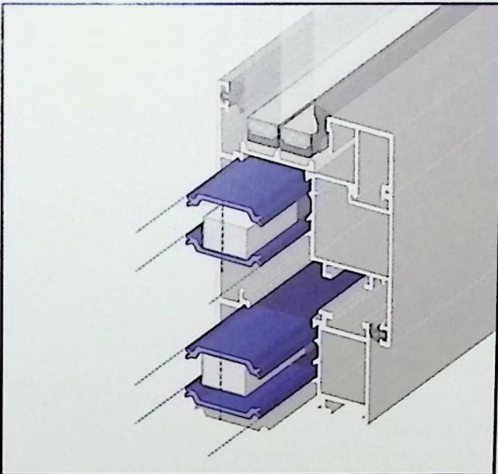
Our three approaches to thermal optimization make sure that we take your needs into account, from the production system, right the way through to structural and environmental considerations. Let us work with you to find the right combination of solutions to reach your targets.



低辐射膜 Low-emissivity foil

现如今对节能的需求越来越多，我们必须进行创新，才能应对这一挑战。通过在系统内加装了内鳍（通常称为“T型条”），我们在减少热对流方面前进了一大步，但这还不够。我们又在断桥隔热系统内鳍上添加了“低辐射”薄膜，进一步降低U值，从而减少辐射传热，达到EN ISO 10456要求的热辐射系数，即 $\epsilon=0.02$ 。这种解决方案简单有效，能够用于 200°C (392°F)的高温环境下，性价比极高，同时还可为其进行粉末喷涂处理或阳极氧化处理。

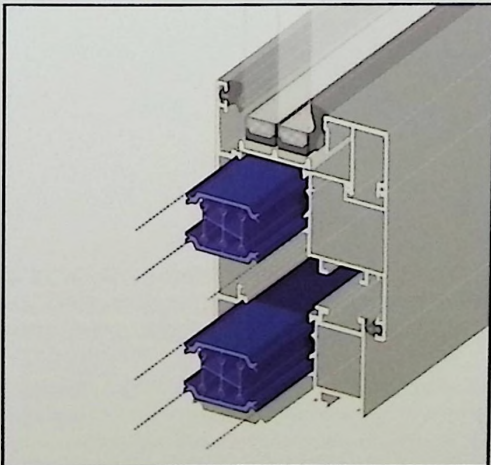
As requirements for energy saving increase, innovations must rise to the challenge. Designing a system with inner fins (commonly addressed as 'noses') is a big step towards reducing convection, but it doesn't end there. Adding so-called 'low-e' foil to the inner fins in thermally broken systems lowers the U-value even further, with a radiant heat reduction and emissivity of $\epsilon = 0.02$ according to EN ISO 10456. This simple but effective solution can withstand 200°C (392°F), offers an excellent price-to-value ratio and can even be powder-coated or anodized.



尼龙泡沫 Polyamide foam

为进一步降低U值，可在新系统或现有系统中采用泡沫。这种方法无需改变现有的系统设计，但如何控制材料消耗增加或处理难度增大呢？我们的答案是：采用可进行粉末喷涂处理的闭孔尼龙泡沫，使您无需另作加工处理。这种采用耐化学泡沫的解决方案不仅环保，而且浪费少、易回收，其 λ 值为 $0.036\text{W}/(\text{mk})$ 。

To further reduce U-values, foam can be added to a system – new or already existing – without changing the design. What cannot happen, however, is that this causes increased material or handling complexity. Our answer to this challenge? A closed-cell, powder-coatable polyamide foam, which requires no additional handling from you. Environmentally protective with low levels of waste and the ability to be recycled with little effort, this chemically resistant foam solution has a λ value of $0.036\text{W}/(\text{mk})$.



组合式解决方案 Package solution

采用断桥隔热技术的系统主要面临两方面的挑战：稳定性和热量散失。我们的组合式解决方案能够在不改变结构的前提下优化隔热。我们的复合型材拥有几何形空腔，就像一张网，最终实现型材内部错综复杂的结构，从而减少热对流，实现客户需求的机械性能和隔热性能。

Systems requiring thermal breaks present two main challenges: stability and heat loss. We created our package solution to achieve thermal optimization without structural compromise. Our compound of profiles is geometrically chambered, like a web, resulting in a labyrinth-like inner profile that reduces convection and provides the required mechanical stability and performance.

我们的原则：

优化您的工艺流程，让您无需操心。

Our principle: we optimize your processes and you have more time for the important things.

为达到铝门窗幕墙隔热性能的巅峰，我们一直在不断优化改进。我们的特殊加工方案可以让您的工艺流程更具效率，从而使您可以安心专注于其他事务。

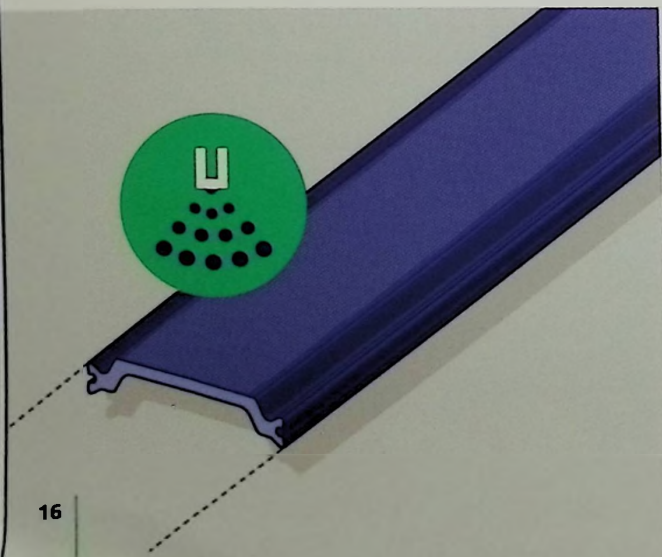
小提升，大影响

对生产线工艺流程的细微改动往往会牵一发而动全身。减少步骤和减少工作量可能是宏观角度下最无足轻重的两点，但它们也能产生大影响。如何在生产中保护型材、喷涂型材是一个难题，增加工艺流程意味着增加额外步骤，既耗时又费财。为助您攻克这一难题，我们推出了多种解决方案，确保我们的型材拥有高品质表面，易于均匀喷涂，同时在加工过程中不影响原本欲达到的外观效果。创新方案虽小，却能让您的工艺流程更具效率，助您顺利完成工作。

Insulation for aluminum windows, doors and facades can always be optimized and improved to hit peak performance. Our specialized processing methods can streamline your workflow and leave you to focus on the rest.

Small improvements for big impact

On the production line, small changes to processes can make all the difference. Removing steps and reducing effort might seem like small considerations in the grand scheme of things, but they can have a big impact. Protecting and coating profiles is difficult during production, and many processing additions require extra steps that can cost time and money. To help you overcome these, we developed solutions that ensure that our profiles maintain a high surface quality, accept paint evenly and easily, and don't lose their intended visual appearance in the construction process. Small, innovative solutions that streamline your processing flow and help you get the job done.



喷砂

Sandblasting

视觉外观是一栋建筑成功与否的关键因素之一。通常采用的方法是对建筑部件进行粉末喷涂，这种方案虽然有效，但喷涂的均匀性却是一个问题。我们可以对我们的型材进行喷砂处理，使其表面变得粗糙，确保喷涂的均匀性，降低生产中的报废率。

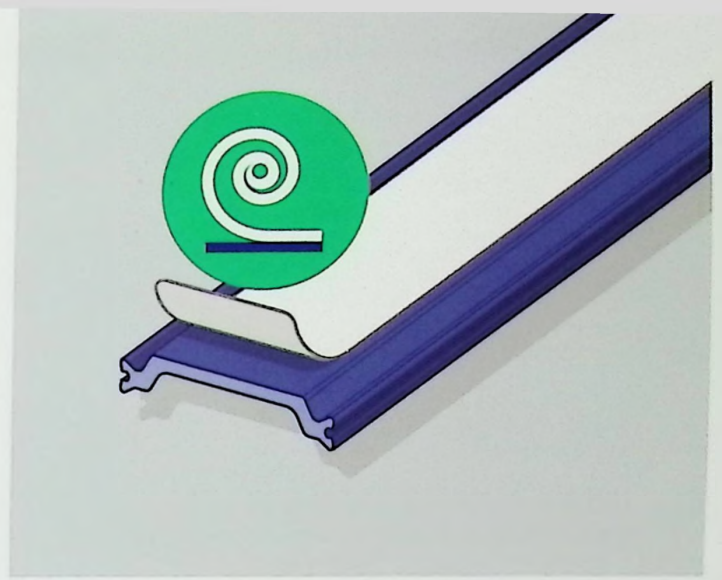
Visual appearance is a key part of the result in a building. Components are often powder-coated, which works well, but can present problems with the evenness of adhesion of the powder. We can sandblast our profiles, roughening the surface and thus achieving an evenness of adhesion, meaning a lower rejection rate in production.

贴膜

Adhesive film

如何使型材表面保持平滑也是美学上的一个挑战。我们提供的贴膜型材，能够在喷涂加工过程中保护型材，使型材在出厂时保持高质量的平滑外观。

Maintaining the visual appearance of a smoothly produced profile presents a different aesthetic challenge. Supplying profiles with an adhesive film already applied protects them during the coating process, and means they remain looking as smooth and high-quality as they did when they left the plant.

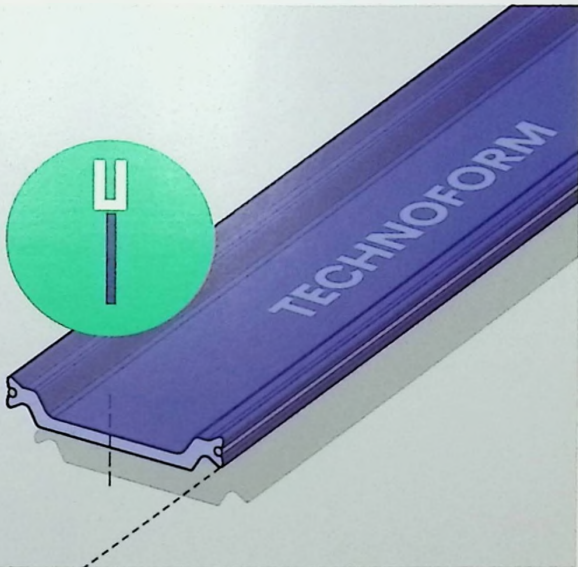


激光打码

Lasermarking

有时候，一些细节往往能提升产品的质量和功能性。我们可以为您的型材添加激光商标，提升品牌可见度，增加产品价值，或者让其更便于追踪，以助您改善物流及管控质量。

Sometimes it's little touches that add quality and functionality to a product. By having your profiles lasermarked, you can increase your brand visibility, adding value to your products, or simply make them easier to trace for improved logistics and quality control.

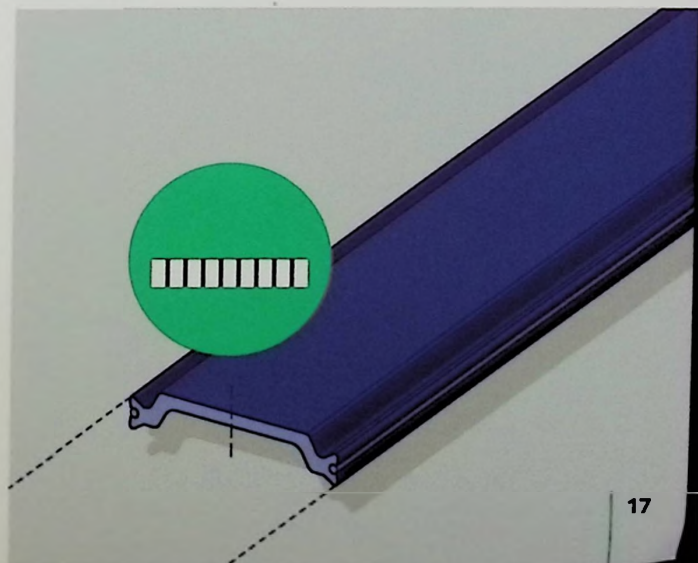


胶线

Glue wire

如果您需要在生产中增添工艺流程，可能既费时又费财，例如，您或许想在型材上添加胶线，以缓和粉末喷涂过程中抗剪强度下降的情况。对此，我们可以为您预装胶线，使您免于另行加工的烦恼。

If you need to add extra steps to your production process, we know that this can be a drain on time and money. Adding glue wire to a profile reduces the loss of shear strength due to powder coating, and we can pre-install it for you, meaning no extra processes or added headaches on your end.



您面临的挑战，
是我们前进的动力。

Your challenge is our motivation.

特殊挑战需要特殊解决方案，接下来您将了解：我们如何应对门窗幕墙行业的难题，确保您在复杂的实际应用过程中符合规范并拥有出色表现。

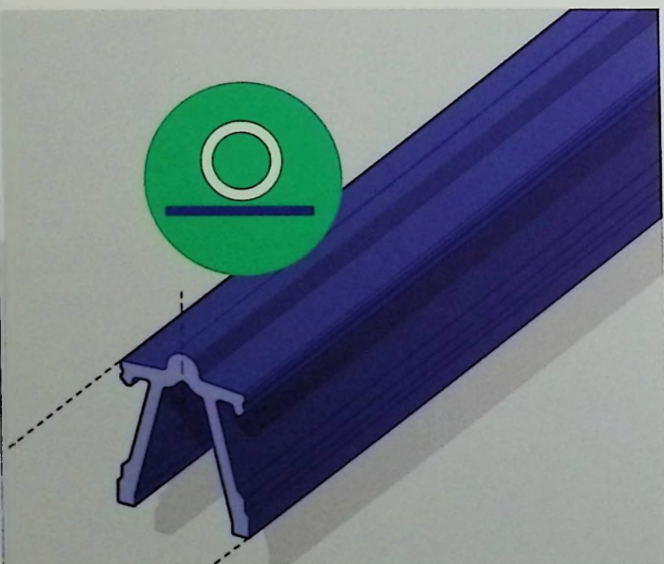
以创新克服特殊挑战

在市场和实际应用中，往往会出现对特殊解决方案的需求。我们满怀热忱为您解决这些问题，哪怕是最特殊的挑战，我们也竭尽全力，按照您想要的形式，呈现您需要的品质。不论是符合特定规范要求，以创新攻克温差造成的难题，还是开发复杂应用方案，我们都向您保证：解决您眼前的挑战，并针对不同需求给出不同解决方案。

Specific challenges require specific solutions, read how we tackle conundrums in the windows, doors, and facades industry to ensure you are regulation compliant & have optimum performance in complex applications.

Innovating to overcome particular challenges

Sometimes, markets and applications call for very particular solutions. We are passionate about problem solving and put our minds to even the most specific of challenges to deliver you the quality you expect in the form that you need it. Whether that is complying with particular regulatory requirements, innovations to overcome temperature phenomena, or devising methods for complex application, we engage with you to isolate and address the challenge at hand.



尼龙导轨—推拉门窗的解决方案

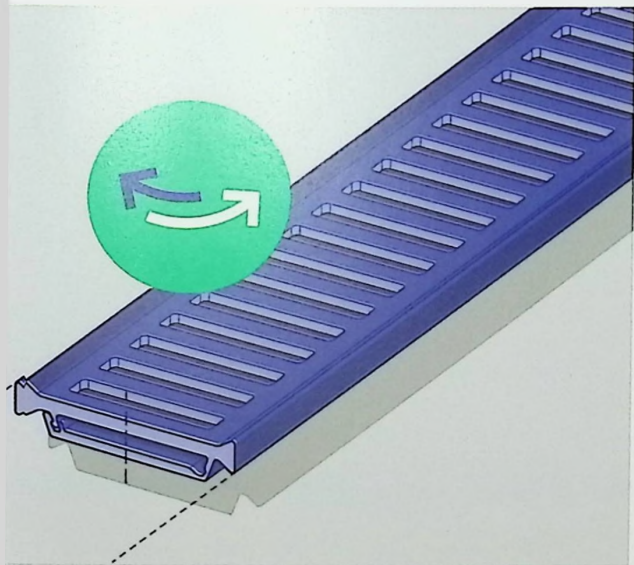
Solutions for sliding windows and doors

推拉门窗是现代建筑的常见选择，而在美观和功能方面取得平衡更是关键。如何在保持隔热性能的同时优化视觉美感，是一项复杂的挑战。为应对这一挑战，我们在生产型材时严格把控轮廓和几何形状的精确度，同时以极致平滑的表面确保门窗的自由滑动。我们针对各类门窗量身打造了不同的型材，详见我们的标准型材目录。

Sliding windows and doors are a common choice in modern buildings placing emphasis on a balance between aesthetics and functionality. Preserving thermal optimization whilst maximizing visual minimalism and mechanical functionality is a complex challenge. To achieve this, our profiles are produced to tight tolerances with exact contours and geometry, and also have an optimally smooth surface to allow friction-free movement. We have several different profiles for sliding windows and doors in our standard profiles catalogue.

我们不断检查
产品价值。

We continuously check
the values of our products.



防拱 Anti Bi-Metal

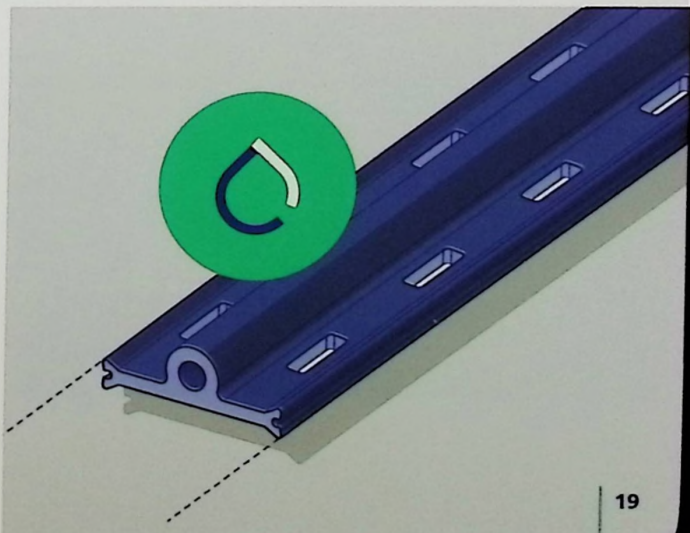
所谓的“双金属效应”出现在内外框温差较大的情况下（例如：强烈的日光照射）。在这种情况下，整扇门因外框膨胀而发生形变，难以启闭。我们的解决方案是：让外框在发生膨胀时对内框的影响降到最低，从而确保其正常使用。这种结构装卸方便，我们也可以为您进行预装，使您无需调整自己的工艺流程。

The so-called bi-metallic effect occurs when there is a large difference in temperature between the inner and outer frame of a door (e.g. through intense sunlight). The outer frame expands and can cause distortion of the door and locking difficulties. Our solution allows the outer frame to expand with only minimum affect to the fit of the inner frame, meaning it continues to function as normal. Easily replaced, this addition comes pre-installed, meaning there is no change to the process on your side.

排水 Drainage

根据法国 NF P24-301 规范规定，窗户必须开有排水孔以便雨水流出。采用带有排水孔的型材，您无需再自行钻孔，也就提升了产品的价值。

French NF P24-301 regulation stipulates that windows must have drainage holes for water to filter through the profiles. By supplying profiles with drainage holes means that fabricators do not need to drill these holes themselves, thereby adding value to the product they sell.

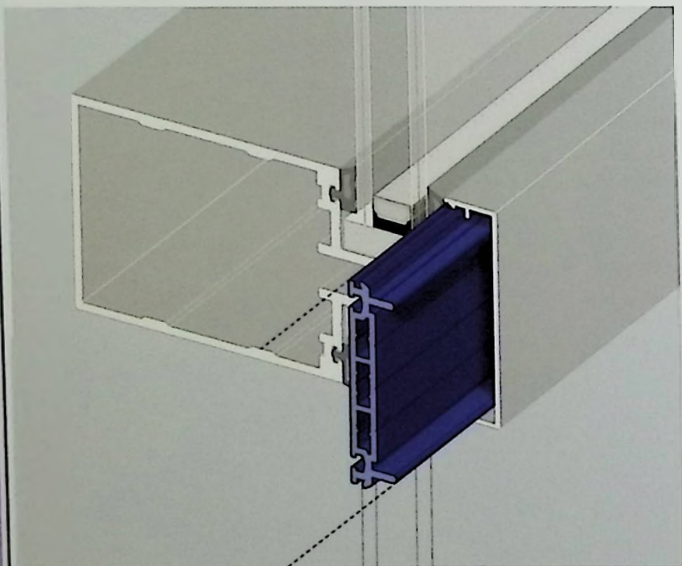


幕墙解决方案—— 让现代建筑更加智能

Facade solutions – boosting intelligence in modern buildings

就办公楼和其他大型建筑项目的外观而言，要实现重量轻、耐久高、符合流行审美这几点，通常会选用铝材。除满足视觉要求以外，我们还更进一步，使建筑更加智能化：我们用于外墙隔热的铝制幕墙解决方案，能够提升这种常用材料的隔热性能。这种方案自有其优势，您只需安心坐观我们优化您的幕墙。

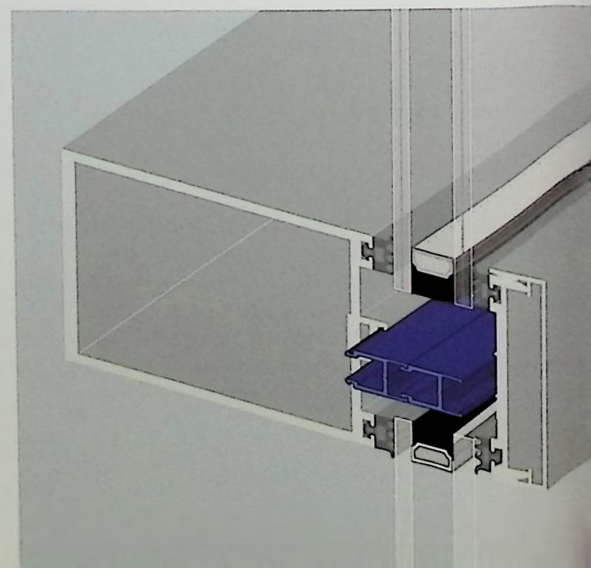
Lightweight, durable, stylish: when it comes to the exteriors of office buildings and other large-scale construction projects, aluminum is frequently the material of choice. Aside from the visual aspects we take a step further to a more intelligent construction. Our aluminum facade solutions for external wall insulation help improve the thermal performance of this popular material. And we do it for a reason. Just relax and let us optimize your facades for full peace of mind.

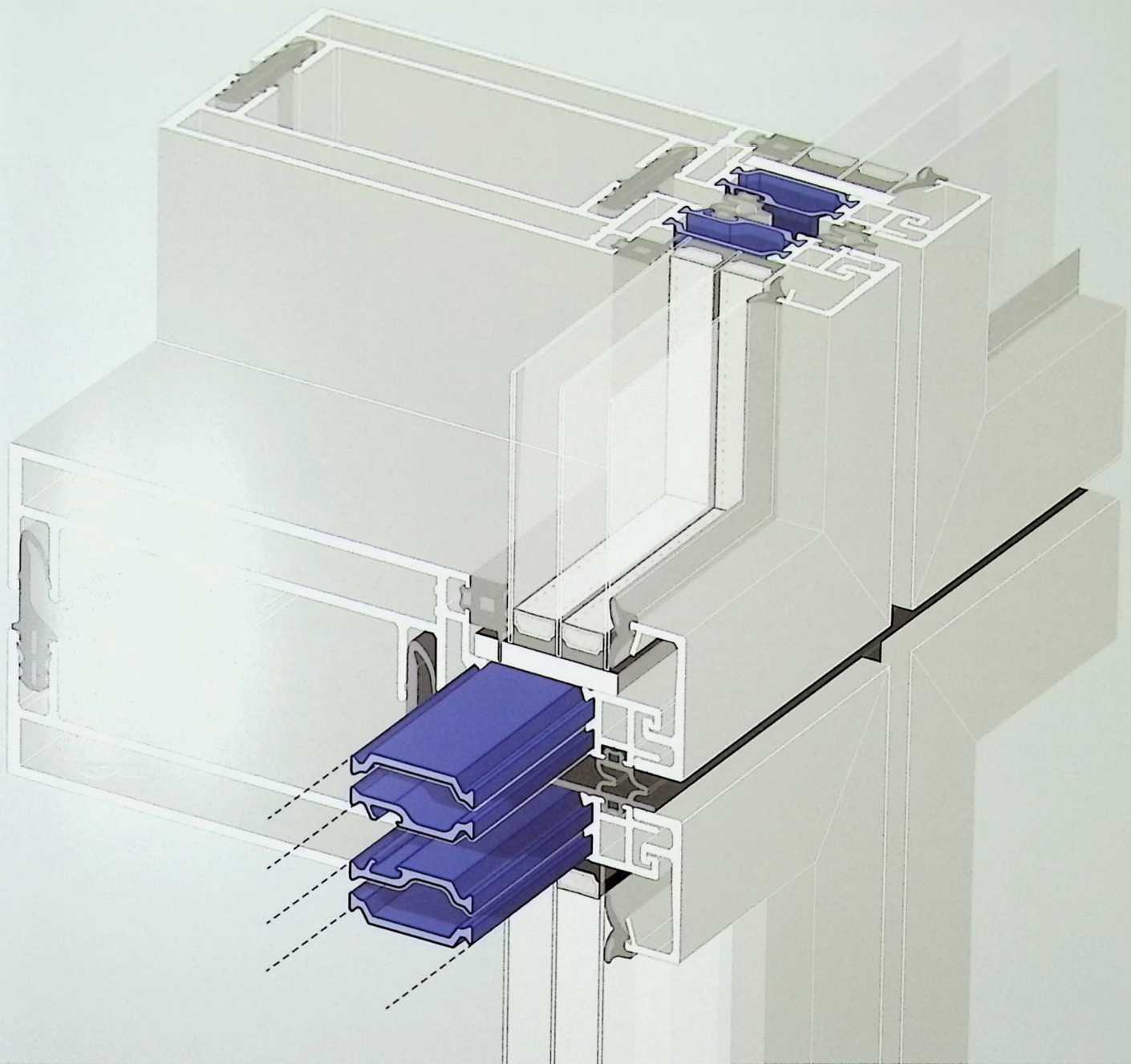


构件式幕墙 Stick facades

针对构件式幕墙，我们提供了 20 多种不同的尼龙卡接条和特殊压板。精确而言：我们的系统解决方案将 U 值降低到 $1\text{W}/\text{m}^2\text{k}$ ，实现了一流的隔热性能。

For stick-facades, we offer a variety of 20 different standard polyamide spacers and pressure plates. To be more precise: our system solutions offer best-in-class thermal performance with U-values as low as $1\text{ W}/(\text{m}^2\text{K})$.

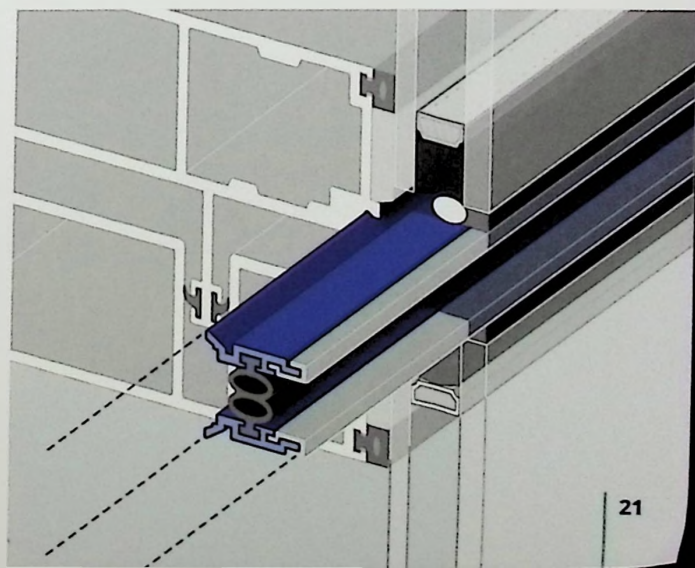




单元式幕墙 Unitized facades

我们所有窗户的隔热解决方案都适用于单元式幕墙，同时我们还为新系统提供了特殊的尼龙护边材料。

All our insulating solutions for windows are suitable for unitized facades and we have special polyamide glass edge profiles for new systems.



我们选用的材料——
始终保证最佳品质

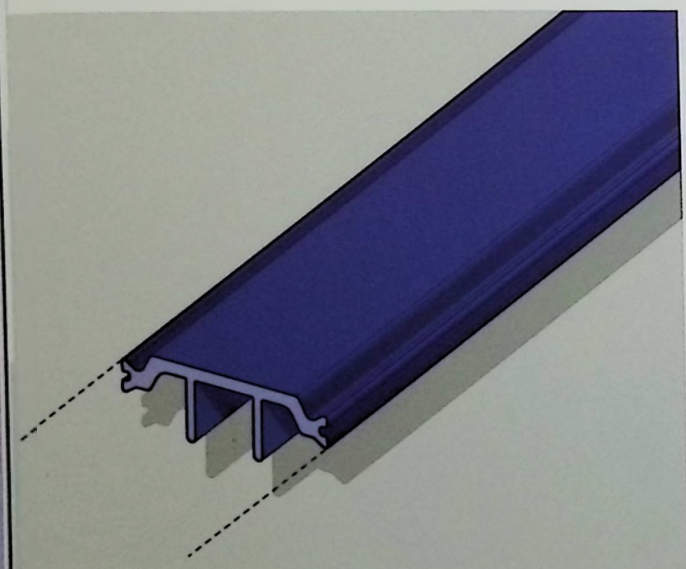
Our materials – always rely on the best

我们只使用最高品质的材料，您大可放心。在此基础上，我们提供多样化的主要材料，以便为您的每一个需求提供最合适的解决方案。这些材料拥有丰富特性，例如：加工的高精度性、兼容性、生产过程中的环保性、优异的机械性能等，均值得您信赖。

我们乐于在各方面为您提供建议：机械性能、全球变暖趋势、隔热性能等等。

When it comes to our materials, you can be assured that we are only satisfied with the best. Thus, we offer a major material variety to find the perfectly tailored solutions for every project. High precision for processing, compatibility, environmentally friendly production and best mechanical performance are just some of the characteristics you can rely on.

No matter if it is about mechanical values, global warming potential or thermal performance, we will be delighted to advise you.



标准尼龙/PA66 GF25 Standard Polyamide / PA 66 GF25

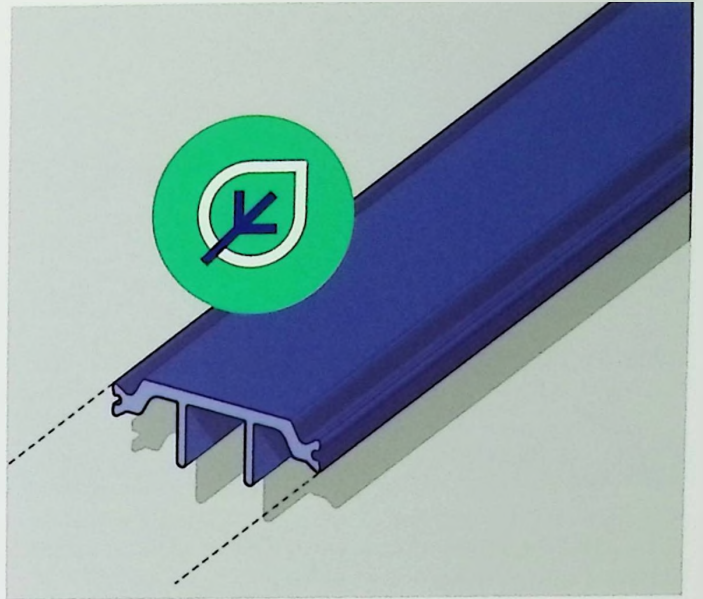
我们的标准尼龙拥有无限的可用性和无限再循环能力，亦具备绝佳的性能能够满足您的需求。

With our standard polyamide we guarantee unlimited availability and recyclability as well as excellent performance to match your needs.

生物基尼龙
Bio-based Polyamide

我们的生物基尼龙从植物中提取，具有无限再循环性，大大降低了碳排放量。

Our bio-based polyamide is derived from plants and its unlimited recyclability significantly reduces your carbon footprint.

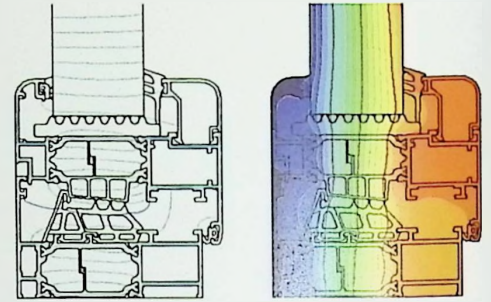


热工计算

Thermal calculation

自断桥隔热技术出炉起，泰诺风就时刻准备与您共迎挑战，为您的每一次开发提供热力计算服务。多年以来，我们主动致力于开发各种系统，力求将隔热性能推到极致。

From the beginning of thermal break history, Technoform has always been ready to take up your challenges, supporting each of your developments with the help of thermal calculations. Through the years, we have contributed proactively to the development of different systems, pushing the limits of thermal performance.



系统日益复杂，标准要求日渐严苛，将全新的挑战摆在了我们眼前——提升我们的技术支持。我们每天都与最知名的 FEA 软件打交道，不断拓宽我们的专业知识，提升我们的专业技术，为您呈现我们的全新解决方案和设计。在与客户合作的过程中，我们使用过 Bisco、Flixo、winIso、Therm，因此积累了数年经验，能够为您提供最可靠的整窗或窗框的计算结果。我们能够根据您的需要，基于全球通用的计算方法和标准，利用最合适的软件为您进行精确计算。

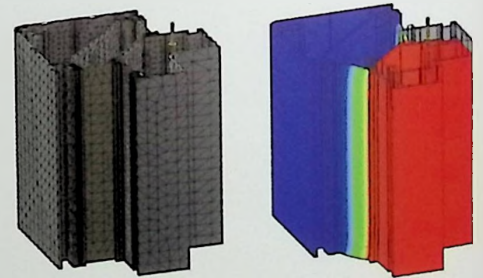
The increase of complexity of the systems together with increasingly strict standard requirements places us in front of new challenges to continue improving our support. Daily we work with the most wellknown FEA software on the market, enlarging our know-how and offering you our innovative solutions and designs. Years of positive experiences with our customers using BISCO, flixo, WinIso and THERM allow us to give you the most reliable results in window and frame thermal transmittance, every time. Following your needs, we can perform calculations using the most suitable software to give you accurate results according to worldwide calculation methods and standards.

机械性能模拟

Mechanical simulation

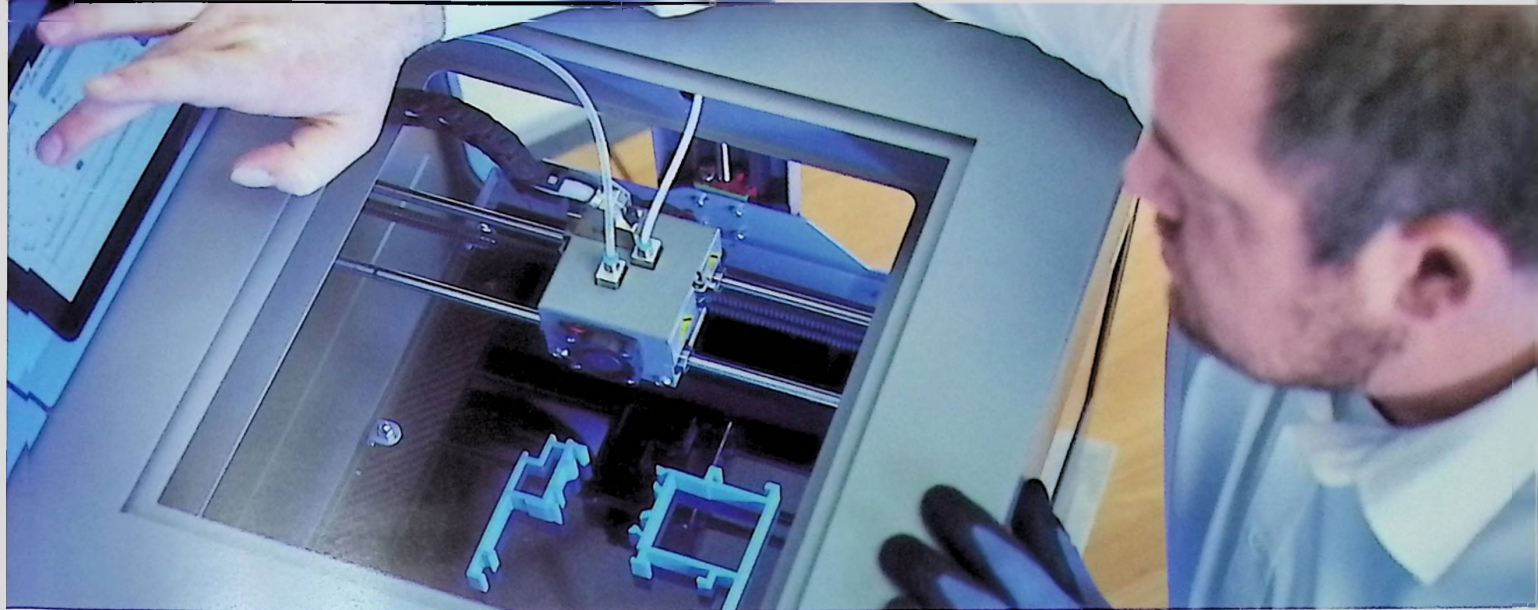
我们在门窗幕墙市场奋斗了 50 多年，经历了它的变革。在我们看来，如今市场对创新型特殊解决方案的需求日益增多。

Being in the window, door, and facade market for over 50 years, we experienced the evolution of the market. Today, we see a consistent market trend towards an increase of innovative and special solutions.



这就对隔热条的设计加工提出了更为复杂的要求，即：隔热条不仅要发挥隔热作用，还要满足结构要求，这也要求我们对材质特性有深刻理解。正因如此，掌握力学性能相关的专业技术和知识也越来越重要。在设计过程中对复合系统的表现进行预测，既能减少研发次数或研发成本，也能保证最佳品质。为应对您面临的各种挑战，我们启用了一种全新的工具：如今我们采用 FEA 软件进行力学模拟，根据 EN 14024，为您的断桥隔热提供最佳力学解决方案，也为您的门窗幕墙系统的性能提供可靠预测。

This leads to a growing complexity in the design process with a strip that is taking not only the function of a thermal barrier, but also structural requirements, requiring a deep knowledge of material properties. Therefore, the know-how of mechanical performance is getting more and more crucial. Predicting the behaviour of a complex system during the design process can be a great advantage to reduce development time/costs and have the assurance of best quality. To be ready to take up your challenges, we have a new tool to develop your ideas. We now use a FEA software for mechanical simulation which allows us to get the best mechanical solution for your thermal break and a reliable forecast of behaviour of the assembled system, according to EN 14024.



参与编制欧洲标准 与中国标准

In European Standard and Chinese Standard

主编的标准 Editor in Chief

- GB/T 23615.1-2017 铝合金建筑型材用隔热材料第1部分：聚酰胺型材
GB/T 23615.1-2017 Thermal barrier material for architecture aluminum alloy extruded profiles-Part 1: Polyamide profiles
- YS/T 437-2018 铝合金型材截面几何参数算法及计算机程序要求
YS/T 437-2018 Aluminium profiles moment of inertia calculation methods and computing software requirements
- JG/T 174-2014 建筑铝合金型材用聚酰胺隔热条
JG/T 174-2014 Polyamide thermal barrier strips for building aluminum alloy profiles
- JG 175-2011 建筑用隔热铝合金型材
JG 175-2011 Insulating aluminum alloy profiles with thermal barrier for buildings
- YS/T 844-2017 铝合金建筑用隔热型材复合技术规范
Technical specification for assembling process of architecture aluminium alloy profiles with thermal barrier









































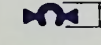




参编的标准 Subeditor

- EN14024-2004 隔热金属型材 - 机械性能 - 要求、验算和评估试验
EN14024-2004 Metal profiles with thermal barrier Mechanical performance Requirement, proof and tests for assessment
- GB 5237.6-2017 铝合金建筑型材 第6部分：隔热型材
GB 5237.6-2017 Wrought aluminium alloy extruded profiles for architecture Part 6: Thermal barrier profiles
- GB/T 8478-2020 铝合金门窗
GB/T 8478-2020 Aluminium windows and doors
- GB/T 8484-2020 建筑外门窗保温性能检测方法
GB/T 8484-2020 Test method for thermal insulating performance for building exterior doors and windows

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产品规格

Standard profiles

| 10 mm | 12 mm | 13.4 mm | 14 mm | 14.6 mm | 14.8 mm |
|---|---|--|--|--|--|
|  244800 |  926900* |  979200 |  202300 |  493100# |  945500* |
| |  405400* | 13.5 mm |  913700 |  240200# |  931000 |
| |  975300 |  249100 |  603200* | 14.6 mm |  948500* |
| |  977500 |  969505 |  202400 |  506300* |  941600* · 951859 |
| |  442500* | |  217100 |  933900 · 951459 |  201000 |
| |  209900 | |  233200 |  951559 · 943300 |  931100 · 951759 |
| |  328100 | |  948600 |  241600 |  961459 |
| |  958241* | |  603300* |  980600 |  925500 |
| |  433800** | |  486900 |  223900 |  221900 |
| | | |  948700 |  313000 |  306400* |
| | | |  235300 |  259900# |  203900 |

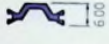
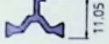



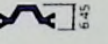


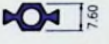


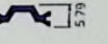



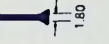

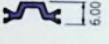


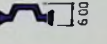
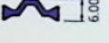
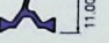

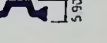
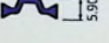
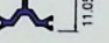
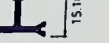
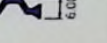


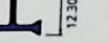
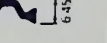



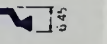



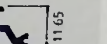
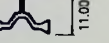
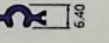
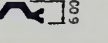
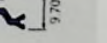
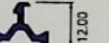
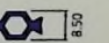
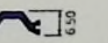
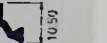
000000 Article Number 产品型号 / 000000 New Article 新产品型号 /

* Article production in China 中国区常备型号 / * Head not compatible to Standard Groove 头部非标准槽口

14.8 mm

15 mm

16 mm

| | | | | | |
|--|--|---|--|--|--|
|  208500 |  270300 |  299000* |  910300 |  962159# |  961859 |
|  952100 · 962059 |  457300* |  486100 |  952200# |  973500 |  963900 |
|  406100# |  403400 |  606100*# | |  256700* |  203200# |
|  378600* |  289700 | | |  962259# |  219900 |
|  937600* |  937700 | | |  970559 |  253100* |
|  953241* |  961559* | | |  973600 |  270000 |
|  221400 |  987400 | | |  942100 |  940800 |
|  237600 |  459600* | | |  976100 · 925100 |  976000 |
|  246700 |  488200 | | |  941800 |  214400 |
|  320100* |  977000 | | |  221000 |  221100 |
|  257100 |  295600 | | |  277200 |  227500 |


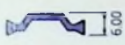



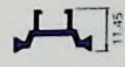








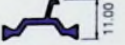






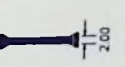








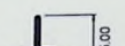

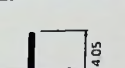
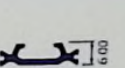
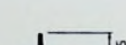


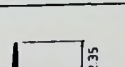
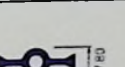
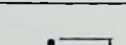
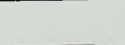
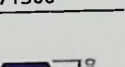
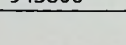
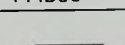
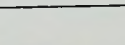
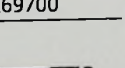
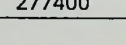
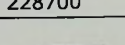
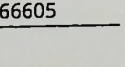
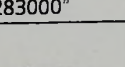
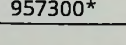
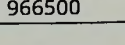
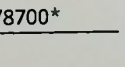
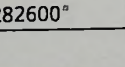
产品规格

Standard profiles

| 16 mm | 16.5 mm | 18 mm | 18.6 mm | 18.6 mm | 18.6 mm |
|---|---|---|--|---|---|
|  270100 |  977400 |  955100 |  276900 |  912100 · 912159 |  979300 |
|  961959 | 16.6 mm |  908300* |  290600* |  944300 |  330500 |
|  977600 |  420800* |  551000* |  414100* |  251500* | 19 mm |
|  445500 | 17 mm |  221200 |  357400 |  591300* |  434900* |
|  977900 |  592000 |  249200 |  955200 |  276800 |  435000* |
|  940300 | 286600*# |  964000 |  277000 |  283400* |  435100* |
|  945900 | 17.4 mm |  261200* |  322100* |  977700 |  435200* |
|  981700 |  242700* |  550900* |  248300 |  332700* | 19.8 mm |
|  539900* | |  270200 |  955300 |  522300* |  457400* |
|  980900 | |  955000 | 418000*# |  522200* |  457500* |
| 277600* | |  463600* | |  952459 | 457600* |

000000 Article Number 产品型号 / 000000 New Article 新产品型号 /




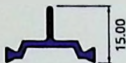


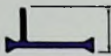

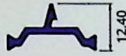
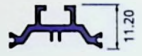

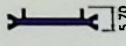


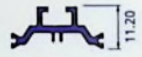




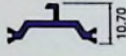
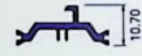


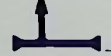


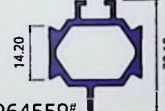


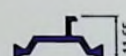

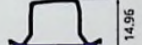
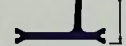
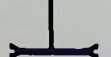

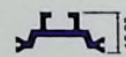





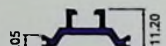








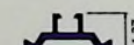


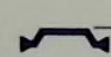


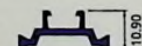
* Article production in China 中国区常备型号 / * Head not compatible to Standard Groove 头部非标准槽口

| 20 mm | | | 20.6 mm | 22 mm | |
|---|---|--|--|--|--|
|  933200 |  260700* · 942600 |  325500 |  221500 ⁿ |  202200 |  574600* |
|  266800* · 279400 |  279500 · 296200 |  297800 |  221600 ⁿ |  242900 |  243000 |
|  912500 · 957600 |  976600 |  924900* | 21 mm |  229900* |  431300 |
|  361000 |  439500 ⁿ |  964100 | |  556500 |  908400 |
|  387200* |  545600* |  540000* |  357500 |  228100 |  254100 |
|  234700 |  964200 |  562100 |  556400 |  257300* |  389600 · 388200* |
|  269100* |  957400 |  499500* | |  271300* |  439100 |
|  945800* |  444500 |  228900 | |  269700 | 23 mm |
|  277400 |  228700 |  493200* | |  966605 | |
|  957300* |  966500 | | |  978700* |  282600 ⁿ |
|  941700 |  218500 | | |  551100* |  538800 |

产品规格



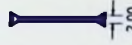







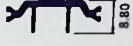



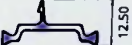
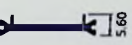
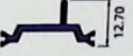




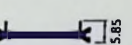




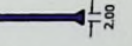
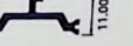
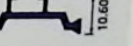





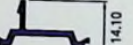
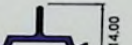

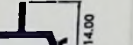
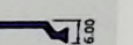
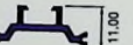

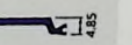
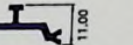


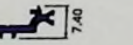


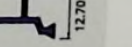
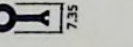

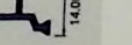
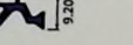
Standard profiles

24 mm

| | | | | | |
|---|--|--|---|--|--|
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|  965159* |  246300* |  956059 |  979900 |  962659 |  214800 |
|  390900 |  271400(498800)* |  957500 |  224000 |  251600* |  448400 |
|  241700° |  927200 |  231900 |  228800 |  969859* |  224600 |
|  279600 |  925200* |  285700* |  403500 |  969759* |  964559# |
|  975900 · 307300* |  975700* |  404000* |  513000(231800)* |  214000 |  464600 |
|  979500 |  249000 |  228200 |  403900* |  984300 |  479700* |
|  459500 |  269000* |  956159 |  418200 |  459700* | |
|  936800 |  279700 |  414200* |  406200° |  459800* | |
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|  987200 |  940400 |  577600* |  399200 |  547100* | |


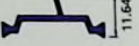

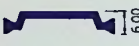





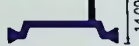
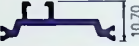

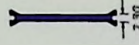
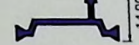

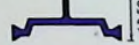
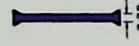
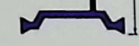
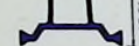
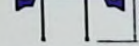
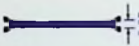
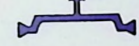
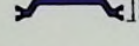
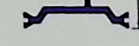
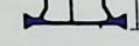
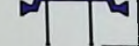

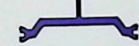
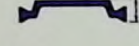
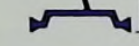
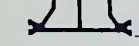
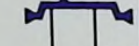
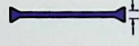
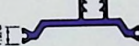
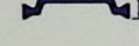
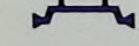
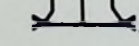
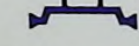
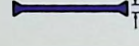
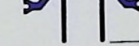
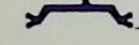
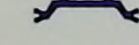
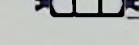

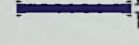
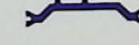
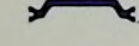
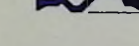
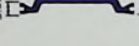
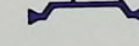
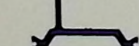


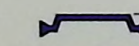


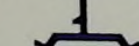
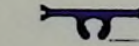
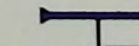

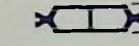
000000 Article Number 产品型号 / 000000 New Article 新产品型号 /

* Article production in China 中国区常备型号 / * Head not compatible to Standard Groove 头部非标准槽口

| 24.8 mm | 25 mm | 25.3 mm | 26 mm | | 27 mm | |
|--|---|--|--|---|---|--|
|  246100 |  950159 |  470200* |  567000* |  264100 |  271900* | |
|  215600 |  562800* |  329600* |  254800 |  357700 |  932000 | |
|  457700* |  249500 |  329700* |  260600 |  557400* |  971605 | |
|  215700 |  946700 |  329800* |  453100 |  557500* |  253800* | |
|  214300 |  974500 | 25.5 mm | |  908500 |  426400 |  253900* |
|  559000* |  974600 | | |  220400 |  304500* |  394200 |
|  458400* |  554100* | |  491200 |  401700 |  942700 | |
|  366500* |  414000* | |  289300* |  208700 | | |
| 25 mm | |  431800* |  978800 |  301000 | | |
|  910400 |  536700** | |  321800 |  300900 | | |
|  979400 | | |  978900 |  259300 | | |

产品规格

Standard profiles

| 28 mm | | | 29 mm | 29.8 mm | 30 mm |
|--|--|--|---|--|--|
|  467400* |  584300* |  308600 |  547200* |  458500* |  947400 |
|  222500 |  516900 |  261900 |  587400* |  458600* |  478600 |
|  948400 |  459900* |  242100 |  547400* | 30 mm | |
|  927700 |  460000* |  321500 |  522400* |  219500 |  475300* |
|  214700 |  450000 |  326800 |  522500* |  220800 |  225500 |
|  223500* |  530800* |  548200 |  522600* |  246200 |  241200 |
|  551200* |  530900* |  571000 |  547300* |  603600* |  352400 |
|  280900 |  280800 |  509900 |  531500* |  908600 |  974700 |
|  354400 |  271600 | 29 mm 29.2 mm | |  324100* |  393000 |
|  475500 |  975100* |  531300* |  460100* |  279800 · 282300 |  349400 |
|  355400 |  229100 |  531400* | |  498000* |  516600 |



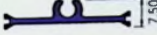
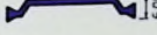
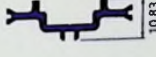
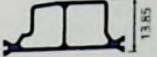


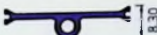

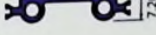
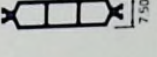
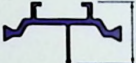
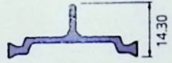
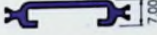
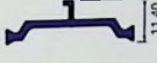
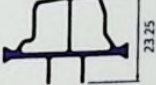
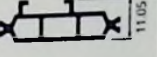
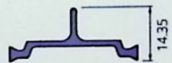
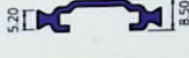
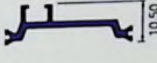
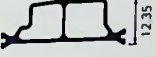
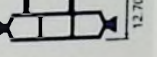

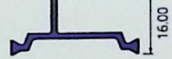
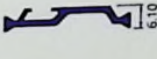
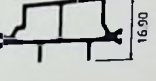
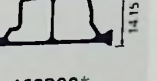



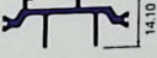

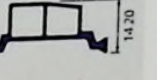

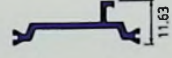

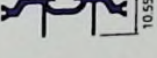
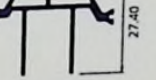
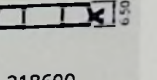

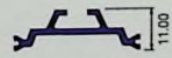
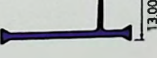

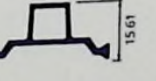
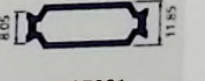

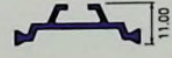

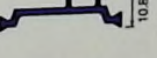
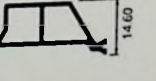
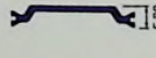
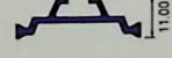

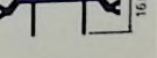
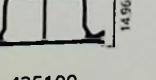

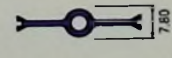
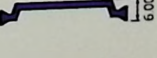
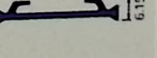
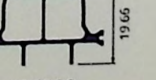
000000 Article Number 产品型号 / 000000 New Article 新产品型号 /

* Article production in China 中国区常备型号 / * Head not compatible to Standard Groove 头部非标准槽口

30 mm



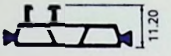
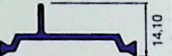
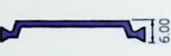

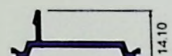
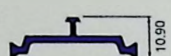
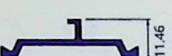
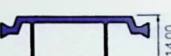

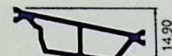
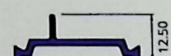
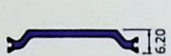

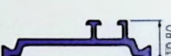
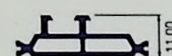
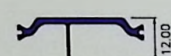
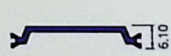


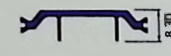
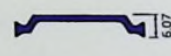
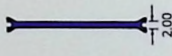
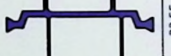

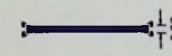
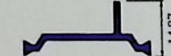

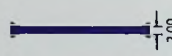



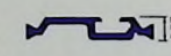


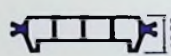


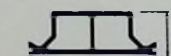


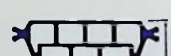




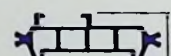




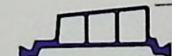

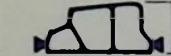


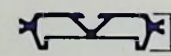
32 mm

34 mm

| | | | | | |
|--|---|--|---|--|--|
|  277100* |  367200* |  273900 |  949200 |  274000 |  429100 |
|  414400** |  259800 |  488300 |  463900* |  543300 |  384200 |
|  414300 |  496000 |  495600 |  260900 |  610700* |  258800 |
| 32 mm |  355800 |  306200* |  422900 |  430400 |  460200* |
|  587000* |  418400 | 34 mm |  240800 |  266500 |  460300* |
|  239300 |  218100 |  603700* |  463800(218400)* |  986300* |  575400* |
|  354700 |  563100 |  464800 |  400100 |  265600 |  218600 |
|  303700 |  412200 |  610600* |  548300 |  321700 |  503700* |
|  371800 |  216100 |  268400 |  575300* |  269200 | |
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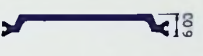


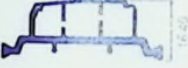
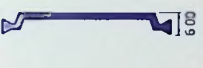
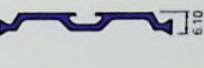
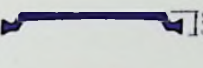


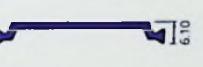
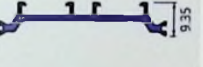
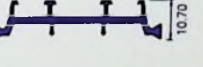

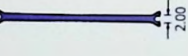
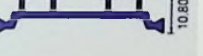
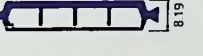
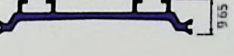
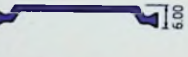
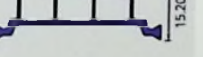
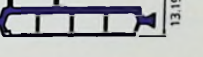
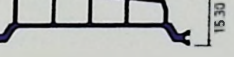
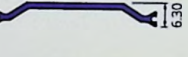
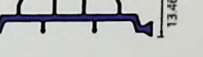
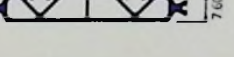

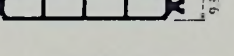
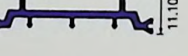
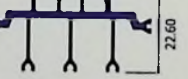
产品规格

Standard profiles

| 34.8 mm | 35 mm | 35.3 mm | 37 mm | 39 mm | 39.8 mm |
|---|--|--|--|--|--|
|  468500* |  516300* |  477500* |  394400 |  575000* |  468600* |
|  468700* |  516400* | 36 mm |  394500 |  522700* |  468800* |
|  366600* |  516500* |  201300 |  515000 |  575100* | 40 mm |
|  366700* |  358700 |  983400 | 38 mm |  522800* |  357800 |
| 35 mm |  452300 |  412100 |  327800 |  522900* |  605600* |
|  432000 |  423700 |  591500* |  266700 |  575200* |  444200 |
|  337700 |  423500 |  392400 |  219300 |  340000 |  287800 |
|  418600 |  427100 |  557600 |  335900 |  340300 |  412000 |
|  215500 | 35.3 mm |  478100 |  363700 |  340100* |  441900 |
|  522100 |  485500* | 37 mm | 39 mm |  340200 |  553500* |
|  533200 |  477400* |  394600 |  546200 |  368500 | |

000000 Article Number 产品型号 / 000000 New Article 新产品型号 /

* Article production in China 中国区常备型号 / * Head not compatible to Standard Groove 头部非标准槽口

| 41 mm | 44 mm | 45 mm | 48 mm | 50 mm |
|--|--|--|--|--|
|  441500* |  332500 · 502100 |  466500 |  365800 |  419400 |
|  441700* |  574700* | 46 mm |  457000 |  470800 |
|  555800* |  352100 | |  200100 | 54 mm |
| 42 mm |  501000 |  506500* |  419500* | |
| |  286300 |  574800* |  467100* |  419600* |
|  592900* |  574900* |  467300* |  462800* | |
|  334800 | |  506600* |  492200 | |
|  593000* | | |  539600 | |
|  461500* | | | | |
|  463000* | | | | |

产品规格

Standard profiles

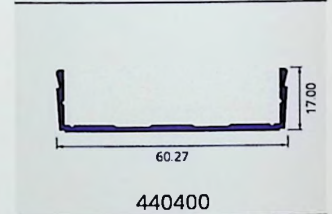
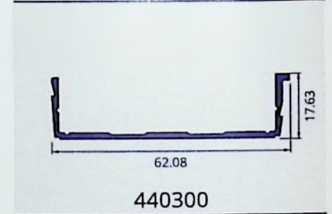
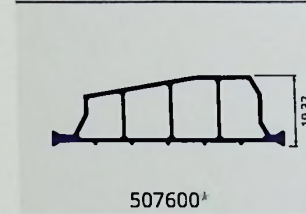
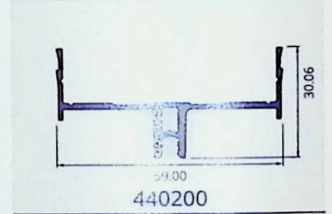
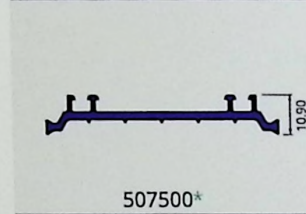
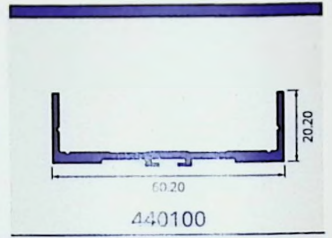
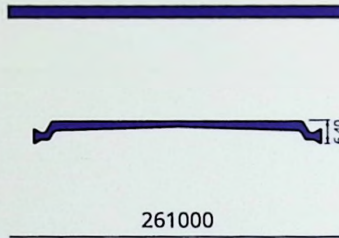
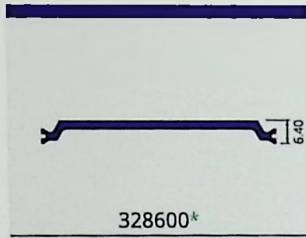
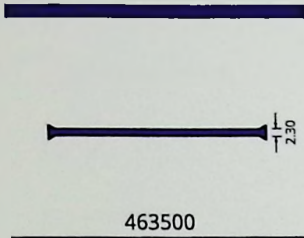
Profiles for minimal sliding doors

窄边框用隔热条

60 mm

64 mm

77 mm



000000 Article Number 产品型号 / 000000 New Article 新产品型号 /

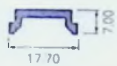
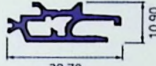
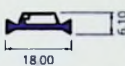
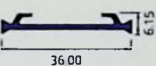

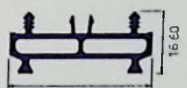


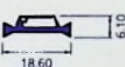
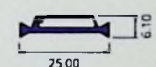


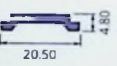
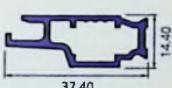
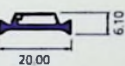
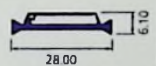
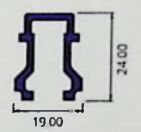

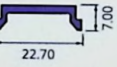
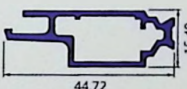
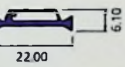
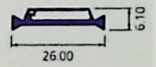
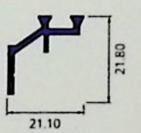
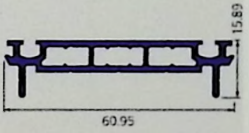
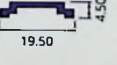

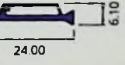
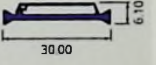
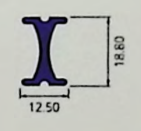
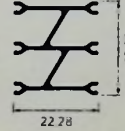
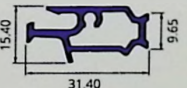
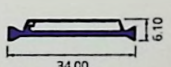
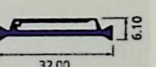
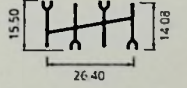

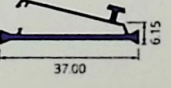
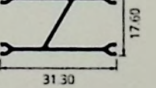
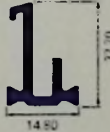
* Article production in China 中国区常备型号 / * Head not compatible to Standard Groove 头部非标准槽口

Operating Rods
多点锁连杆

Hidden Sash
隐扇用

Anti-bi-metal
防拱型号

Specials
特殊型号

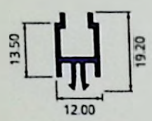
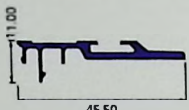
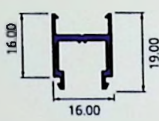
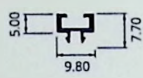
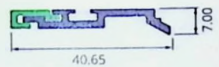
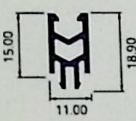
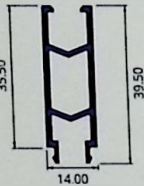
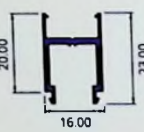
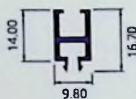

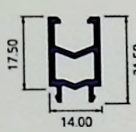
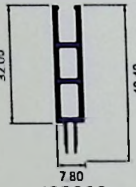
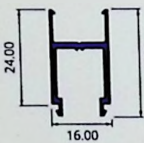
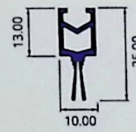
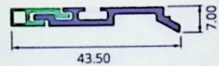
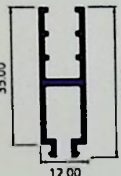
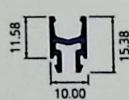
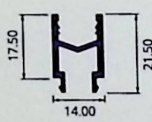
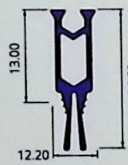
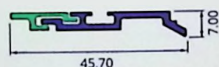
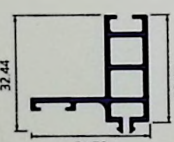
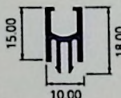
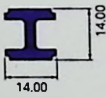
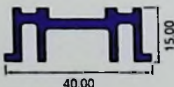
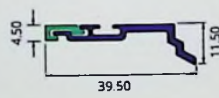
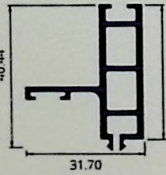
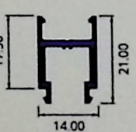
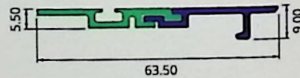
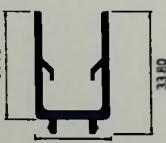
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|--|---|--|--|---|---|
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| 224400 | 346000 | 458800 | 521000 | 200600 | 339700 |
|  19.50 4.10 |  31.80 19.00 |  18.60 6.10 |  25.00 6.10 |  21.00 15.48 |  14.00 4.70 |
| 218000 | 375400* | 317000 | 316200 | 212100 | 492000 |
|  20.50 4.80 |  37.40 14.40 |  20.00 6.10 |  28.00 6.10 |  19.00 24.00 |  15.15 5.77 |
| 254700 | 506400* | 370000 | 418100 | 234800 | 432100 |
|  22.70 7.00 |  44.72 15.40 |  22.00 6.10 |  26.00 6.10 |  21.10 21.80 |  60.95 15.89 |
| 224500 | 513400* | 317100 | 387500 | 254400 | 449500 |
|  19.50 4.50 |  34.40 15.20 |  24.00 6.10 |  30.00 6.10 |  12.50 18.80 |  22.27 22.28 |
| 565800* | 550600* | 339900 | 339000 | 263800 | 461700* |
| |  31.40 15.40 9.65 |  34.00 6.10 |  32.00 6.10 |  26.40 15.50 14.08 |  19.13 28.31 |
| | 529500* | 429900 | 464400 | 344400 | 563700* |
| | |  37.00 6.15 | |  31.30 17.60 |  14.80 22.20 |
| | | 520900 | | 441600* | 505200 |

产品规格

Standard profiles

Curtain Wall Spacers 幕墙用卡接条

Edge Cover 护边

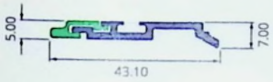
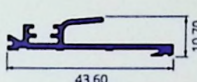
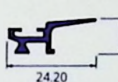
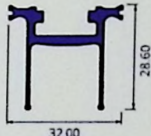
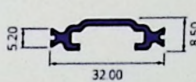
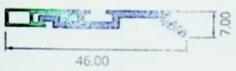
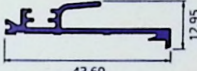
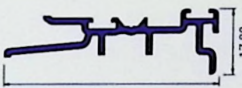


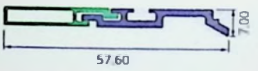
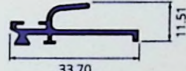
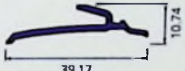
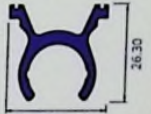

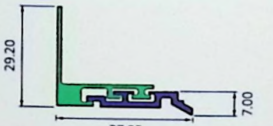
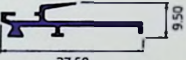

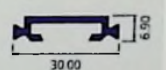
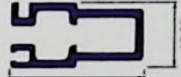
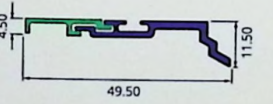
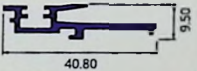
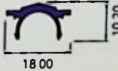
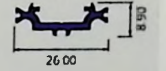
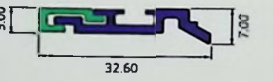
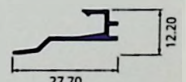
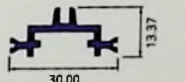
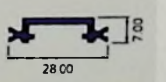
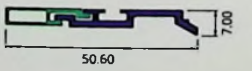
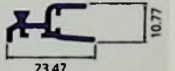
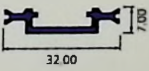
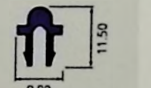
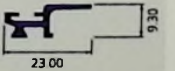
| | | | | |
|--|--|--|---|--|
|  217300 |  337400 |  959000 |  309900 |  507100 · 527300* |
|  218200 |  242400 |  959100 |  310000 |  509100* · 524800* · 520700* |
|  242300* |  423200 |  959200* |  341700 |  521900* |
|  212500 |  248800* |  472500 |  341800 |  524000* |
|  398900 |  280100 |  578700* |  491700* |  559100* |
|  399000 |  536600* | | |  581000* (此为尼龙编号) |
|  337500 | | | | |

000000 Article Number 产品型号 / 000000 New Article 新产品型号 /

* Article production in China 中国区常备型号 / * Head not compatible to Standard Groove 头部非标准槽口

**Edge Cover
护边**

**Profiles for sliding windows and doors
推拉门窗用S型**

| | | | | |
|--|---|---|--|---|
|  524600* |  200500# |  415500 |  229000 |  419000# |
|  527500* |  979600# |  389900 |  272700 |  354300 |
|  527900* |  244900 |  371900 |  232600 |  384300 |
|  530300* |  343200 |  933000 |  245000 |  173600 |
|  530500* |  385200 |  385100 |  301000 | |
|  530700* |  248100 |  263000 |  255300 | |
|  527700* |  254500 |  282200 |  519600* | |
| |  403600 | | | |

PA66 隔热条的储存

Storage of insulating strips made of PA 66

由聚酰胺制成的隔热条具有一定的吸水性。吸水的速度与吸水量，取决于下列因素：

Insulating strips made of polyamide are initially dry but absorb moisture from the environment in the course of time after manufacture. The rate and level of moisture absorption depend on the following factors:

环境湿度

Ambient humidity

环境温度

Ambient temperature

储存时间

Storage period

夏季，仓库的温度和湿度比较高，隔热条吸收的水分也会比其他季节多，应短期存放。在干燥环境下储存，相对湿度较低，但如果储存时间过长，隔热条含水率超过 2%，将导致隔热条机械性能发生变化。

In the summer months, when the temperature and relative humidity in warehouses are higher than usual, the insulating strips absorb more moisture than in the remaining seasons, even when stored properly for brief periods. During storage under dry conditions, the equilibrium moisture content is lower, approx. 2 %. Due to this moisture absorption the mechanical properties of the strips change.

因此，我们建议隔热条应被储存在温度为 15-20°C 的室内

**We therefore recommend storing the profiles
in a covered area with an ideal temperature range of 15 – 20 ° C**

如果隔热条所堆放的货架短于隔热条的长度（例如，6500 毫米的隔热条存放在 6000 毫米的货架上），隔热条末端会出现下垂；或者隔热条堆放的货架没有底板，也容易造成这种状况，并且隔热条不能在货架末端叠放。存放时间越长，产生永久弯曲的可能性就越大。

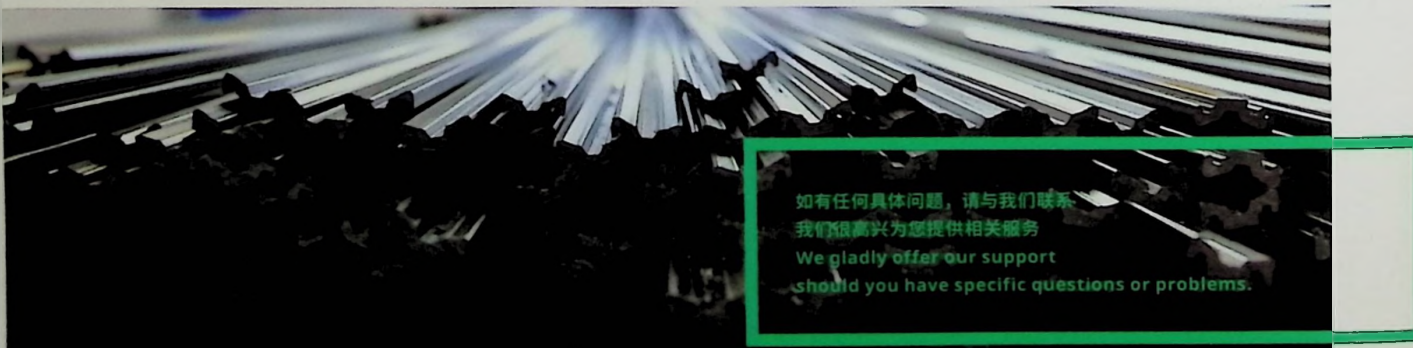
当单独的隔热条被搬离货架时，也可能会发生扭曲变形，如果不及时校正，将会造成永久变形。

因此，我们建议在存放时，要使隔热条的弯曲程度最小化。为防止扭曲和弯曲变形，请尽量缩短预加工的存放时间。

During extended storage periods, the strips change shape according to storage conditions. If the strips are stacked on pallets which are shorter than the strip length (e.g. 6,500 mm strips on 6,000 mm pallets), they sag at the ends. This applies to strips stored in pallets where there is no floor. The strips shouldn't overlap the end of the supports on which they rest.

The longer the storage period, the greater the possibility of the sag becoming permanent. A twisting of the strips, which can occur, for example, when individual bundles are removed from a pallet, can also become permanent if the strips are not straightened.

For this reason, we recommend storing the strips so that the degree of sag is minimized in general. Make sure to support protruding sections and try to keep pre-processing storage periods as brief as possible in order to prevent the strips from twisting and sagging.



如有任何具体问题，请与我们联系
我们很高兴为您提供相关服务
We gladly offer our support
should you have specific questions or problems.

材料数据表

Material data sheet

中华人民共和国国家标准中要求的隔热材料性能

GB/T 23615.1-2017 铝合金建筑型材用隔热材料第1部分: 聚酰胺型材

Based on PRC National Standard GB/T 23615.1-2017

Thermal barrier materials for architecture aluminum alloy extruded profiles--Part 1: Polyamide profiles

| 序号 NO. | 项目 Item | 要求 Demand | 泰诺风产品实测值 ^(b) Test results of Technoform's strips |
|-----------|--|---|--|
| 1 | 密度 Density | (1.30±0.05)g/cm ³ | 1.32g/cm ³ |
| 2 | DSC 熔融峰值 DSC melt temperature | ≥ 255°C | 256°C |
| 3 | 轴钉压力开裂性能 Testing for tensile cracks | 孔口无裂纹 | 孔口无裂纹 |
| 4 | 邵氏硬度 (H _D) D Shore hardness | 80±5 | 81.2 |
| 5 | 低温无缺口冲击强度 (-30 °C ± 2 °C) Low temperature impact strength (unnotched) | ≥ 50 kJ/m ² | 92 kJ/m ² |
| 6 | 室温纵向抗拉特征值 (23 °C ± 2 °C) Room temperature tensile strength (longitudinal) | ≥ 90 MPa | 91 MPa |
| 7 | 室温纵向拉伸断裂伸长率 Room temperature elongation at break (longitudinal) | ≥ 3% | 8.5% |
| 8 | 室温纵向拉伸弹性模量 Room temperature elasticity modulus (longitudinal) | ≥ 4500 MPa | 4904 MPa |
| 9 | 室温横向抗拉特征值 (23 °C ± 2 °C) Room temperature tensile strength (transverse) | I 型 (截面高度 < 20 mm) I shape (section depth < 20 mm) | ≥ 90 MPa 111 MPa |
| | | I 型 (截面高度 ≥ 20 mm) I shape (section depth ≥ 20 mm) | ≥ 80 MPa 98 MPa |
| | | 非 I 型 ^(a) Other Shape | ≥ 25 MPa 40 MPa |
| 10 | 高温横向抗拉特征值 (90 °C ± 2 °C) High temperature tensile strength (transverse) | I 型 (截面高度 < 20 mm) I shape (section depth < 20 mm) | ≥ 55 MPa 60 MPa |
| | | I 型 (截面高度 ≥ 20 mm) I shape (section depth ≥ 20 mm) | ≥ 45 MPa 52 MPa |
| | | 非 I 型 ^(a) Other Shape | ≥ 20 MPa 32 MPa |
| 11 | 低温横向抗拉特征值 (-30 °C ± 2 °C) Low temperature tensile strength (transverse) | I 型 (截面高度 < 20 mm) I shape (section depth < 20 mm) | ≥ 90 MPa 111 MPa |
| | | I 型 (截面高度 ≥ 20 mm) I shape (section depth ≥ 20 mm) | ≥ 80 MPa 98 MPa |
| | | 非 I 型 ^(a) Other Shape | ≥ 25 MPa 39 MPa |
| 12 | 耐水性能 (横向抗拉特征值) Water resistance tensile strength (transverse) | I 型 (截面高度 < 20 mm) I shape (section depth < 20 mm) | ≥ 85 MPa 93 MPa |
| | | I 型 (截面高度 ≥ 20 mm) I shape (section depth ≥ 20 mm) | ≥ 75 MPa 83 MPa |
| | | 非 I 型 ^(a) Other Shape | ≥ 22 MPa 38 MPa |
| 13 | 热老化性能 (横向抗拉特征值) Aging resistance tensile strength (transverse) | I 型 (截面高度 < 20 mm) I shape (section depth < 20 mm) | ≥ 60 MPa 99 MPa |
| | | I 型 (截面高度 ≥ 20 mm) I shape (section depth ≥ 20 mm) | ≥ 55 MPa 97 MPa |
| | | 非 I 型 ^(a) Other Shape | ≥ 20 MPa 28 MPa |

a) 在选用非I型聚酰胺型材时, 应经过工程设计核算。

b) 泰诺风产品实测值来自第三方检测机构“华南检验中心”出具的2020检验报告。

1) 试样的含水率小于0.2%(重量比)

Sample water content less than 0.2% by weight.

2) 试验环境是指室温 23°C ± 2°C 和相对湿度 50% ± 10% 的实验室状态

Norm laboratory condition: (23±2)°C and (50±10)% relative humidity.

合作伙伴

Cooperation partners

法国 France

法国建筑科学技术中心 (CSTB)
CSTB · Centre Scientifique et Technique du Bâtiment
全国门窗幕墙建筑联合会及活动协会 (SNFA)
SNFA · Syndicat National de la Construction des Fenêtres, Façades et Activités Associées

德国 Germany

罗森海姆门窗技术研究院 (IFT)
IFT-Rosenheim · Institut für Fenster- und Fenstertechnik e. V.
慕尼黑热能贮存研究所 (FIW)
FIW-München · Forschungsinstitut für Wärmeschutz e. V.
门窗幕墙信息中心 (IFZ)
IFZ · Informationszentrum Fenster Türen Fassaden e. V.
门窗幕墙制造商协会 (VFF)
VFF · Verband der Fenster- und Fassadenhersteller
德国环境管理协会 (B.A.U.M.)
Bundesdeutscher Arbeitskreis für Umweltbewusstes Management (B.A.U.M.) e. V.
门窗幕墙用铝及环境协会 (A/U/F)
A/U/F Aluminium und Umwelt im Fenster- und Fassadenbau
环境保护促进协会 (EPEA)
EPEA Internationale Umweltschutz GmbH
德国可持续建筑学会
Deutsche Gesellschaft für Nachhaltiges Bauen

英国 Great Britain

建筑用铝委员会 (CAB)
CAB · Council for Aluminum in Building
英国门窗评级委员会 (BFRC)
BFRC · British Fenestration Rating Council

葡萄牙 Portugal

节能门窗制造商全国联合会 (ANFAJE)
ANFAJE · Associação Nacional dos Fabricantes de Janelas Eficientes

意大利 Italy

意大利门窗幕墙制造商行业协会 (UNICMI)
UNICMI · Unione nazionale delle Industrie delle Costruzioni Metallurgiche dell'Involucro e del serramenti
意大利铝制品表面处理联合会/认证组织 (AITAL/QUALITAL)
AITAL / QUALITAL · Associazione Italiana Trattamenti superficiali Alluminio / Organismo di Certificazione

西班牙 Spain

西班牙铝制品表面处理协会 (AEA)
AEA · Asociación Española del Aluminio y Tratamientos de Superficie
西班牙轻质门窗幕墙制造商联合会 (ASEFAVE)
ASEFAVE · Asociación Española de Fabricantes de Fachadas Ligeras y Ventanas
铁纳里亚研究创新中心
Tecnalia Research & Innovation
技术测试实验室 (ENSATEC)
ENSATEC · Laboratorio de Ensayos Tecnológicos

Europe

欧洲门窗幕墙制造商协会联盟
Federation of European Window and Curtain Wall Manufacturers' Associations

North America

美国建筑制造商协会 (AAMA)
AAMA · American Architectural Manufacturers Assn.
北美玻璃协会 (GANA)
GANA · Glass Association of North America
美国门窗热效率评级委员会 (NFRC)
NFRC · National Fenestration Rating Council

South America

阿根廷铝制品及相关金属行业商会 (CAIAMA)
CAIAMA · Cámara Argentina de la Industria del Aluminio y Metales Afines.
巴西国家铝制品制造商协会 (AFEAL)
Brasil AFEAL · Associação Nacional de Fabricantes de Esquadrias de Alumínio.

China

中国建筑玻璃与工业玻璃协会 (CAIGA)
CAIGA · China Architectural and Industrial Glass Assn.
中国建筑金属结构协会 (CCMSA)
CCMSA · China Construction Metal Structure Assn.
香港建筑幕墙装饰协会
Hong Kong Facade Association
全国有色金属标准化技术委员会
National Committee of Standardization for Non-ferrous Metals

Singapore

新加坡绿色建筑协会 (SGBC)
SGBC · Singapore Green Building Council
新加坡建设局 (BCA)
BCA · Building and Construction Authority of Singapore
新加坡国立大学能源研究所 (ESI) ESI · Energy Studies Institute - National University of Singapore

Korea

韩国建筑幕墙协会 (KAFA)
KAFA · Korea Architectural Facade Association

Australia & New Zealand

新西兰门窗协会
Window Association of New Zealand
澳大利亚门窗协会
Australian Window Association
澳大利亚玻璃及玻璃装配协会
AGGA · Australian Glass and Glazing Association

认证 Certifications



欧洲 Europe

TÜV Certification
according to ISO 9001:2015
Cradle to Cradle Certified™ Gold

德国 Germany

TÜV Certification
according to
ISO 14001:2015
ISO 50001:2011
ISO 45001:2018

比利时 Belgium

SECO Certification

俄罗斯 Russia

GOST Certification
Cradle to Cradle Certified™ Gold

中国 China

TÜV Certification
according to
ISO 14001:2015
ISO 9001:2015
ISO 45001:2018

香港 Hong Kong

TÜV Certification
according to
ISO 14001:2015
ISO 9001:2015
ISO 45001:2018

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+852 2665 6322

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