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ITW BUILDEX®

Self-Drilling and Self-Tapping Screws Catalogue

标的®自钻自攻螺钉产品手册

BUILDEX



敬请访问我们的网站

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www.itwbuildex.com (Buildex® 标的®美国) / www.itwcpchina.com (Buildex®标的®中国)

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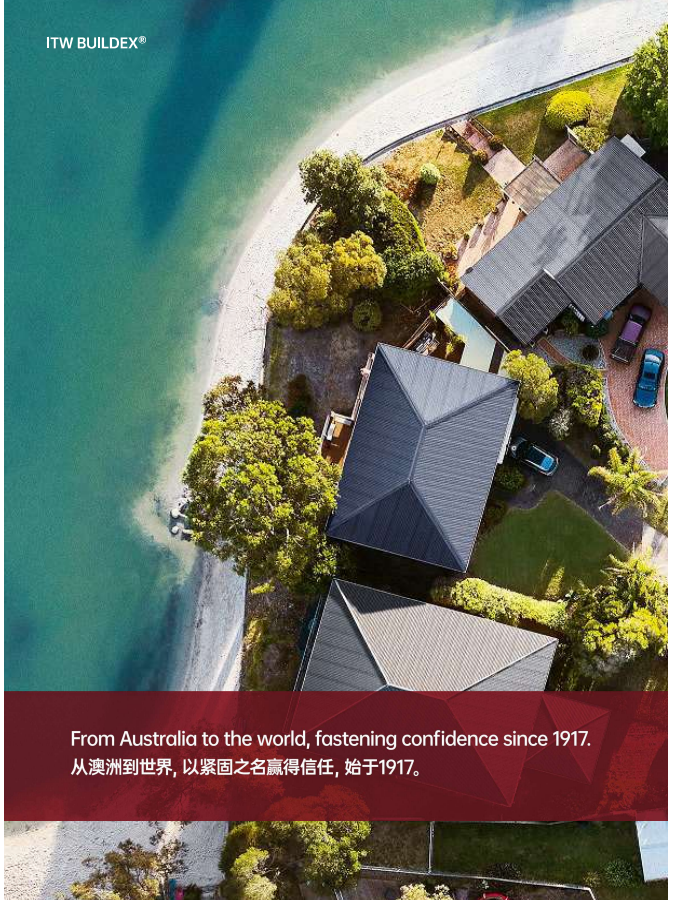
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An aerial photograph showing a coastal residential area. In the foreground, there are several houses with dark, gabled roofs. The houses are surrounded by lush green trees and lawns. A sandy beach is visible in the middle ground, and the ocean is in the background. The water is a deep blue-green color. The overall scene is a peaceful, suburban coastal setting.

ITW BUILDEX®

From Australia to the world, fastening confidence since 1917.
从澳洲到世界，以紧固之名赢得信任，始于1917。



ITW Buildex has a history of over a century, consistently leading the way in global construction fastening technology. Originating in Melbourne, Australia, Buildex® self-drilling and self-tapping screws have demonstrated exceptional precision, durability, and corrosion resistance in numerous major projects around the world. In China, Buildex® screws are widely used in landmark projects such as the Beijing Daxing International Airport, Shanghai Disneyland, and Terminal 3 of Pudong Airport, as well as in advanced manufacturing and industrial plant projects, including those of BYD, Great Wall Motors, Geely, Volkswagen, BMW, GoerTek, Eve Energy, and China Resources Beer.

Whether in high-standard public buildings or industrial production bases with demanding efficiency and durability requirements, Buildex® has earned customer trust through stable product quality, outstanding corrosion resistance, and professional technical support. With a combination of real-world testing and years of engineering experience, Buildex® screws continue to perform excellently and reliably in roofing, curtain walls, and structural connections, ensuring long-term stability and reliability. Build smarter. Build stronger. Buildex.

ITW Buildex 拥有超过一个世纪的历史，始终引领全球建筑紧固技术的发展。起源于澳大利亚墨尔本，Buildex® 自钻自攻螺钉在全球多个重大工程中展现出卓越的精度、耐久性和耐腐蚀性能。在中国，Buildex® 螺钉广泛应用于多个标志性项目，如北京大兴国际机场、上海迪士尼乐园、浦东机场三号航站楼等，同时也被广泛应用于先进制造和工业厂房项目，包括比亚迪、长城汽车、吉利汽车、大众汽车、宝马汽车、歌尔股份、亿纬锂能、华润啤酒等知名企业。

无论是在高标准的公共建筑项目，还是对效率和耐久性要求极高的工业生产基地，Buildex® 通过稳定的产品质量、卓越的防腐性能和专业的技术支持，赢得了全球客户的广泛信任。凭借真实环境的测试和多年工程经验，Buildex® 螺钉在屋面、幕墙及结构连接等应用中，依然保持出色表现，确保长期使用的稳定性与可靠性。智造坚固，筑就未来——Buildex®。



1

ITW and Buildex® Brand Overview

ITW和标的®品牌概况



ITW at a Glance & Business Segments ITW 依工与七大业务板块

Entrepreneurial. Innovative. Everywhere.

创业精神. 创新. 无处不在.



Illinois Tool Works Inc. (ITW), listed on the New York Stock Exchange under the ticker ITW and known in China as 依工集团, is a global leader in diversified manufacturing, ranked among the Fortune 500 companies in the U.S. The company's seven industry-leading divisions leverage ITW's unique business model to drive strong growth in markets requiring highly innovative and customer-centric solutions. With approximately 45,000 dedicated employees worldwide, ITW thrives within its decentralized entrepreneurial culture.

伊利诺伊工具公司 (Illinois Tool Works Inc., 纽约证券交易所代码: ITW, 中国名称: 依工集团) 是全球多元化制造领域的领导者, 位列美国财富 500 强。公司旗下七个行业领先部门依托独特的 ITW 商业模式, 在高度创新和以客户为中心的解决方案市场中实现了强劲增长。ITW 在全球拥有约 45,000 名敬业员工, 他们在公司去中心化的创业文化中蓬勃发展。

From advanced dishwashers, ovens, and refrigerators used in restaurants and hotels to components found in vehicles around the world, the products and solutions we design are ubiquitous. Our building and welding products help shape the environments in which people live and work, while ITW's testing and measurement solutions ensure the quality and safety of millions of products.

从餐厅和酒店使用的先进洗碗机、烤箱及冰箱, 到世界各地汽车中的零部件, 我们制造的产品和设计的解决方案无处不在。我们的建筑和焊接产品塑造了人们的生活与工作环境, 而 ITW 的测试与测量解决方案则确保了数百万产品的质量与安全。



ITW BUILDDEX®



Automotive OEM 汽车零部件

Driving innovation. Expanding possibilities.
推动创新，拓展可能性。



Construction Products 建筑产品

A global provider of premium engineered fastening solutions that improve contractor productivity and building quality in residential and commercial construction.
全球领先的高品质工程紧固解决方案提供商，致力于提升住宅和商业建筑承包商的生产效率与建筑质量。



Food Equipment 食品设备

An industry-leading innovator serving institutional, industrial, restaurant and retail customers around the world.
服务于全球机构、工业、餐饮及零售客户的行业先锋，以创新引领发展。



Polymers & Fluids 聚合物与流体

A global innovator of specialized adhesives, lubricants, additives and car care products for general industry and the automotive aftermarket.

全球范围内的创新者，专注于为一般工业及汽车售后市场提供专业粘合剂、润滑油、添加剂以及汽车护理产品。



Specialty Products 特种产品

An innovative, value-added supplier of solutions for consumer packaging, product branding and other niche industrial applications.

为消费包装、品牌推广及其他细分行业应用提供增值解决方案的供应商，致力于持续创新。



Test & Measurement and Electronics 测试与测量及电子设备

A leading global supplier of production and laboratory testing and assembly equipment, accessories, consumables and aftermarket parts and services.

全球领先的生产和实验室测试设备，以及组装设备、配件、消耗品和售后服务供应商，为客户提供全面支持。

ITW and Buildex® Brand Overview

ITW和标的®品牌概况

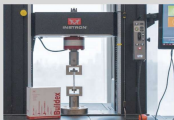


Welding

焊接

An industry leader in advanced, solution-focused products, including our arc welding equipment, welding safety and health solutions and specialty consumables that meet critical needs for welding applications.

作为先进、以解决方案为导向的产品行业领导者，我们提供包括电弧焊接设备、焊接安全与健康解决方案以及满足焊接应用关键需求的特种消耗品。



(The image shows the ITW INSTRON testing machine measuring the performance of Buildex® products. 图为采用ITW 英斯特朗测试机，测量Buildex®产品性能)



Illinois Tool Works (ITW) Construction Division provides innovative solutions and products for the construction industry, covering a range of fields such as tools, fasteners, and adhesive materials. ITW Construction Products owns a portfolio of professional brands that serve global and regional markets, addressing needs in wood structure, concrete and steel structure connections, building hardware, prefabricated components, and flooring systems.

ITW CONSTRUCTION PRODUCTS BRAND OVERVIEW 依工建筑品牌概览

伊利诺伊工具公司 (ITW) 的建筑部门致力于为建筑行业提供创新的解决方案和产品，涵盖了工具、紧固件、粘接材料等多个领域。ITW Construction Products 旗下拥有一系列覆盖全球与区域市场的专业品牌，广泛服务于木结构、混凝土与钢结构连接、建筑五金、预制构件及地坪系统等领域。





In the wood structure and carpentry assembly sector, ITW boasts well-known brands such as Paslode®, GRK®, Cullen®, and Gang-Nail®. Paslode® is the global leader in cordless nailer systems, GRK® provides high-performance wood screws, Cullen® specializes in wood structure connectors, and Gang-Nail® is a leader in metal connector plates and software solutions.

在木结构和木工装配领域，ITW 拥有 Paslode®, GRK®, Cullen® 和 Gang-Nail® 等知名品牌，其中 Paslode® 是全球领先的无线钉枪品牌，GRK® 提供高性能木螺钉，Cullen® 专注于木结构连接件，Gang-Nail® 则在金属连接板和软件方面处于行业领先地位。

In the concrete and steel structure connection field, ITW's core brands such as Spit®, Ramset®, Redhead®, Reid®, and Danley® offer a comprehensive range of services, from concrete fastening systems to flooring solutions.

在混凝土与钢结构连接领域，Spit®, Ramset®, Redhead®, Reid® 和 Danley® 是 ITW 的核心品牌，分别提供从混凝土固定系统到地面解决方案等全方位服务。

In the building hardware and steel sector, Buildex®, Lane®, and Zenith® offer various fasteners and roofing systems to meet diverse construction needs. Additionally, Pryda® and DataBuild® specialize in prefabricated component connection systems and residential building management software, respectively.

在建筑五金与钢材领域，Buildex®, Lane® 和 Zenith® 提供各类紧固件和屋面系统，满足不同建筑需求。此外，Pryda® 和 DataBuild® 分别专注于预制构件连接系统和住宅建筑管理软件。

ITW also has strong regional brands, such as NKT® Fasteners, which provides fastener products in the Nordic market; further expanding ITW's diversified presence in global and regional markets.

ITW 还拥有强势区域品牌，如 NKT® Fasteners，在北欧市场提供紧固件产品，进一步扩展了 ITW 在全球和区域市场的多元化布局。

ITW BUILDDEX®

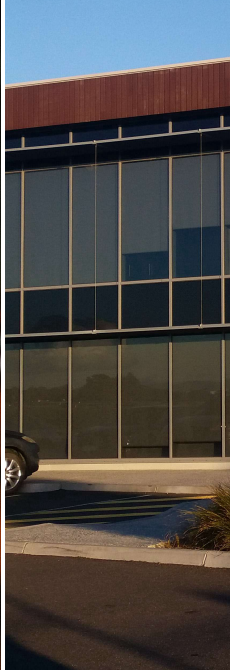


ABOUT BUILDDEX® 关于标的®

ITW Buildex Australia
ITW Buildex 澳大利亚

ITW Buildex was established in 1917 in Melbourne, Australia, and has been at the forefront of innovation in the fastening industry for over a century. After joining ITW in the 1980s, the company focused on the research and manufacturing of high-performance self-drilling and self-tapping screws. With advanced corrosion-resistant coating technologies, Buildex® products are widely used in various natural and applied environments. It is

one of the few companies globally that conducts real-world testing on fasteners and has contributed to the development of the Australian AS3566.2 corrosion standard. Today, Buildex® combines over a century of expertise with cutting-edge technology to continuously provide high-quality and reliable fastening solutions, ensuring products withstand the test of time and environmental conditions.





ITW Buildex成立于1917年，源于澳大利亚墨尔本，百余年来始终引领紧固件领域的创新。1980年代并入ITW集团后，专注于高性能自钻自攻螺钉的研发与制造。凭借先进的防腐涂层技术，Buildex®产品广泛应用于多种自然和应用环境，并是全球少数进行紧固件真实环境测试的企业之一，且参与了澳大利亚AS3566、2防腐标准的制定。今天，Buildex®结合百年经验，持续提供高质量、可靠的紧固件解决方案，确保产品经得起时间和环境的考验。



ITW Buildex North America ITW Buildex 北美



Founded in 1967 in Illinois, USA, ITW Buildex North America was the first company in the region dedicated to developing and manufacturing self-drilling and self-tapping screws for construction. It has become a global innovator and leader in fasteners for steel structural envelope systems.

ITW Buildex北美公司于1967年成立于美国伊利诺伊州，是北美地区首家专注研发和生产建筑用自钻自攻螺钉的企业，也是全球钢结构围护系统用紧固件的领导者与创新者。

ITW Buildex China Milestones ITW Buildex ——百年传承，汇聚中国，赋能钢构

In 1979, ITW Buildex® was fortunate to be introduced to China by BlueScope Group's Lysaght company, with its products being first applied at the Suzhou Hotel—one of the five hotels open to foreign visitors. This marked a key opportunity for Buildex® to enter the Chinese market. As a landmark project during the early stages of China's reform and opening-up, Buildex® products contributed innovative fastening solutions to

the modernization of the country's construction industry.

1979年，ITW Buildex®有幸被BlueScope集团的Lysaght公司引入中国，并首次应用于姑苏饭店——五座对外开放的饭店之一，这为Buildex®在中国市场打开了重要的契机。作为改革开放初期的标志性项目，Buildex®产品为中国建筑行业的现代化进程提供了创新的紧固解决方案。

Buildex® Project Reference | Gusu Hotel (Suzhou)
标杆® 项目案例 | 姑苏饭店（苏州）





Buildex® Project Reference | Daxing Airport (Beijing)
标的®项目案例 | 大兴机场 (北京)



Buildex® Project Reference | Tesla Gigafactory (Shanghai)
标的®项目案例 | 特斯拉超级工厂 (上海)

In 1998, ITW established a wholly-owned subsidiary in Suzhou, China — ITW Construction Products (Suzhou) Co., Ltd. marking the official entry of the Buildex® brand into the Chinese market. In 2013, the company moved to Shanghai and was renamed ITW Construction Products (Shanghai) Co., Ltd. (www.itwcpchina.com).

“1998年, ITW集团在中国苏州设立独资子公司——伊礼诺建筑产品(苏州)有限公司, Buildex®品牌正式进入中国市场。2013年, 公司迁至上海, 并更名为依工建筑产品(上海)有限公司(www.itwcpchina.com)。”

The company primarily operates with the Buildex® brand of self-drilling and self-tapping screws from Australia and

North America, with registered trademarks including “Buildex®” in English and “标的®” or “标迪®” in Chinese. After more than 20 years of development, the fusion of Australia’s century-old corrosion protection technology and North America’s high-strength fastening advantages has successfully taken root in China. Buildex® has not only become the designated brand for major steel structure cladding system companies in China, but also, through screw selection, installation support, and waterproofing solutions, provides internationally leading solutions to China’s steel structure industry. This helps domestic steel structure enterprises meet the demands of complex climates, harsh environments, and high-performance requirements, while also empowering them to move toward the global stage.

公司主要经营澳洲与北美Buildex®品牌的自钻自攻螺钉产品, 注册商标包括英文“Buildex®”和中文“标的®”或“标迪®”, 经过二十多年的深耕, 澳洲的百年防腐技术与北美的高温钢结构紧固技术成功融合落地中国。Buildex®不仅成为中国大型钢结构围护系统企业的指定品牌, 还通过螺钉选型、安装支持和节点防水方案等增值业务, 为中国钢结构行业提供国际领先的解决方案, 推动国内钢结构企业在应对复杂气候、严苛环境和性能需求时, 不仅满足国内需求, 更助力它们走向世界舞台。

2

Buildex®: Innovation & Advantages

标的® 创新与优势

Buildex® Product Innovation
标的®产品创新

Over its century-long history, ITW Buildex has consistently embraced technological innovation as the core driving force. Whether through breakthroughs in material performance or optimizations in structural design, Buildex® has continually advanced industry standards, shaping the future of fastening technology.

在逾百年的发展历程中, ITW Buildex 始终秉承技术创新的核心驱动力。无论是在材料性能的突破, 还是在结构设计的优化方面, Buildex® 不断推动行业标准的提升, 塑造了建筑紧固技术的未来。

Next, let us take a journey through time to revisit those landmark innovations and designs—each of which not only propelled the advancement of fastening technology but also solidified Buildex®'s leadership in the global market.

接下来, 让我们通过时间轴, 回顾那些具有里程碑意义的创新与设计——它们不仅推动了紧固件技术的飞跃发展, 也奠定了Buildex®在全球市场的领导地位。





ITW Teks® Drill Bits 钻头 (1965年)

Efficient. Reliable. Built for Steel. One-step drilling. Proven performance. With self-drilling design, heat resistance, and durability, Teks® is the trusted choice for steel construction.

高效·可靠·为钢而生。一钻到位，历经验证。Teks® 钻头凭借自钻设计、耐高温、耐磨损特性，成为钢结构施工的优选工具。



HiGrip®高绑® (1985年)

Prevents water ingress, securely locks the roof panels in place, and ensures no slippage even when walking on the roof, achieving long-lasting sealing and stable connection for metal roofing.

防止雨水渗入，牢固锁定屋面板，即使在屋面上行走也不易产生滑动，实现金属屋面的持久密封与稳固连接。



ShankGuard®螺杆保护段(1990年)

ShankGuard® enlarges the hole during installation to protect the shank coating and prevent premature corrosion beneath the roof.

螺杆保护段防止刮伤螺杆涂层，避免屋面板下方因腐蚀性导致的早期失效。



XP3 Coating XP3涂层

XP3 is a dense, mechanically applied polymer coating that prevents hydrogen embrittlement and provides lasting corrosion protection.

XP3 是致密、常温机械涂覆的聚合物防腐涂层，有效防止氢脆，提供持久保护。



Climaseal®刻力封®3 (1985年)

Climaseal®3 coating meets AS3566 standards and has been validated through real-world environmental testing.

Climaseal®3 刻力封®3 涂层符合 AS3566.2 标准，且通过真实环境测试验证，防护性能值得信赖。

Buildex® Product Innovation 标的®产品创新



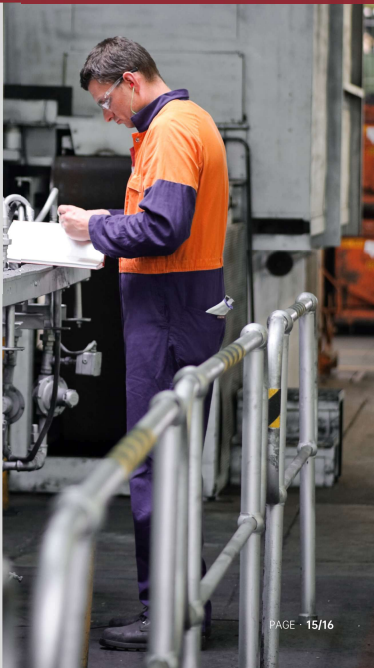
Climaseal®4刻力封®4 (2006年)

It is clearly identified by the "BX4" marking on the screw head. Ideal for: Mild to severe marine and industrial environments, providing strong resistance to salt spray, wind, UV, and humidity. 螺钉头部带有"BX4"标识, 便于识别。适用轻度至重度海洋环境及工业区域, 有效防御盐雾、风力、紫外线和湿气等自然腐蚀因素。



Climaseal®5刻力封®5 (2010年)

Climaseal®5 meets the ISO 9223 environmental standard and is engineered for severe marine, high-humidity, and highly corrosive industrial conditions. It delivers exceptional long-term durability under the most aggressive environments. Climaseal®5涂层符合 ISO 9223 环境标准, 专为重度海洋、高温及高腐蚀性工业环境设计, 提供卓越耐久防护, 应对最严苛的腐蚀挑战。





Roof-Lok® Typhoon-Resistant Washer 抗台风垫片 (2016年)

In 2010, ITW Buildex® developed the typhoon-resistant gasket series, Corri Lok® and Square Lok®. By enhancing the contact area and sealing performance, these gaskets reduce the risk of roof panel lifting and water leakage, making them ideal for buildings in high-wind areas. After years of design and testing, in 2016, Buildex® upgraded the Corri Lok® and Square Lok® series and launched the universal version, Roof Lok®. This product inherits the original wind-resistant features and further improves the wind uplift resistance of roofing systems through innovative design. The upgraded Roof Lok® is highly adaptable to different roof profiles, making it widely applicable to high-wind construction projects, especially in extreme weather conditions such as typhoons, offering superior lifting resistance.

BUILDEX®: INNOVATION AND ADVANTAGE 标的® 创新与优势

2010年, ITW Buildex®研发推出了抗台风垫片 Corri Lok®系列及 Square Lok®系列。通过增强接触面积与密封性, 降低屋面板掀翻与渗水风险, 这些垫片成为高抗风区域建筑的理想选择。经过多年的设计与测试, 2016年, Buildex®对 Corri Lok®和 Square Lok®系列进行了升级, 推出了通用版本 Roof Lok®。该产品继承了原有的抗风功能, 并通过创新的设计进一步提升了屋面系统的抗风揭性能。升级后的 Roof Lok®在适应不同屋面型材的同时, 广泛适用于高抗风要求的建筑项目, 特别是在台风等极端气候条件下, 提供了更为出色的抗掀翻性能。



Climaseal®4+刻力封®4+ (2020年)

The screw head is marked with the distinctive "BX4+" logo for easy identification. It is suitable for light to moderate marine environments and heavy industrial environments, providing effective resistance against corrosion factors such as salt spray, wind, UV rays, and moisture.

螺钉头部带有醒目的“BX4+”标识，便于识别。适用于轻中度海洋环境及中重度工业环境，能够有效抵御盐雾、风力、紫外线和湿气等多种腐蚀因素。



Climaseal® Colored Spray Paint Perfect Finish. Seamless Match. 彩色喷漆，色彩匹配，焕新如一

ColorMatch® spray paint is precisely formulated to match the color of roofing steel panels, ensuring a seamless, uniform appearance.

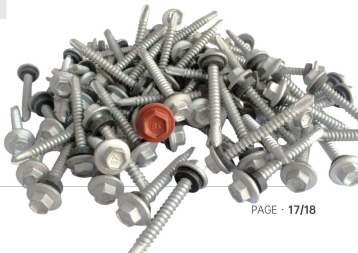
ColorMatch®喷漆精准匹配屋面彩钢颜色，实现无缝融合，提升整体美观一致性。



Buildex® Quality You Can Rely On 经得起时间考验的品质承诺

Buildex® offers environment-specific warranty durations to ensure long-term performance and reliability across diverse applications.

标的®根据不同环境应用，提供多种年限的产品质量保证，确保长期稳定可靠的使用表现。



Climaseal® “Invisible armor” for screws 刻力封® “隐形铠甲”防腐科技



Climaseal® Coating employs a multi-layer protection technology, like an “invisible armor” for each screw, effectively resisting corrosion factors in harsh environments, including moisture, salt spray, acid rain, and UV radiation. Whether in high-salinity coastal areas or industrially polluted cities, Climaseal® offers long-lasting and reliable corrosion protection, extending the lifespan of structures and reducing maintenance costs. It is a trusted fastening solution for roofing and building applications.

Climaseal® coating provides excellent corrosion resistance through its sacrificial protection, sealing, and self-healing mechanisms. It is the ideal choice for achieving long-term performance in building applications.

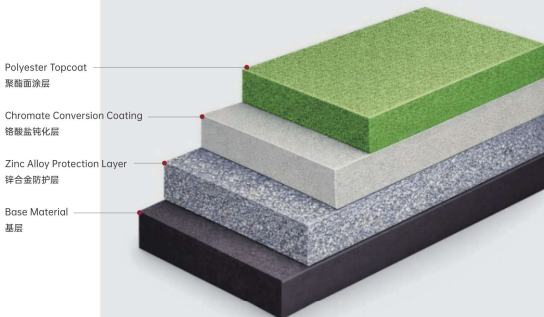
Climaseal®刻力封®涂层采用多重防护技术，犹如为每一颗螺钉穿上一层“隐形铠甲”，能有效抵御严环境中的腐蚀因素，包括湿气、盐雾、酸雨及紫外线侵袭。无论是海边高盐区域，还是工业污染严重的城市，Climaseal®刻力封®都能提供持久可靠的防腐保护，延长结构使用寿命，降低维护成本，是值得信赖的屋面与建筑紧固解决方案。

Climaseal®刻力封®涂层通过其牺牲保护、密封和自修复三重机制，提供优异的防腐性能，是建筑应用中实现长期使用效果的理想选择。

**Base Material + Zinc Alloy Protection
Layer + Chromate Conversion Coating
+ Polyester Topcoat**
**基层 + 锌合金防护层 + 铬酸盐钝化层 + 聚酯面
涂层**

These four layers work together, providing structural support, sacrificial corrosion protection, passivation enhancement, and weather resistance, resulting in exceptional and long-lasting corrosion protection.

四者协同作用，从内到外分别提供结构支撑、牺牲性防腐、钝化增强与耐候保护，从而实现优异和长期的防腐性能。



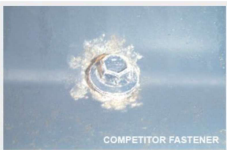


The density of the mechanical coating on screws is one of the key indicators of coating quality, typically ranging from grade 1 to grade 10, with coatings above grade 8 performing excellently. A higher density (above grade 8) makes the coating stronger and more durable, providing longer-lasting corrosion protection for the screws and enhancing their performance in harsh environments.

The Buildex® Climaseal® mechanical coating density exceeds grade 8, meaning that during the drilling process, it effectively reduces wear, loosening, and even peeling, ensuring the screws' corrosion protection remains intact over prolonged use.

螺钉机械底镀层的致密度是镀层质量的重要指标之一，一般在1到10级之间，其中8级及以上的镀层表现优异。较高的致密度（8级以上）使得镀涂层更加坚固和耐久，为螺钉提供更持久的防腐性保护，并提高其在恶劣环境中的性能表现。

Buildex® Climaseal®机械底镀层的致密度达到8级以上，这意味着螺钉下钻过程中，能够有效减少损耗、松动甚至剥落，确保螺钉在长时间使用中的防腐性能不下降。





Buildex® Mechanical Properties

标的®关键机械性能

Property项目	Explanation说明
Tensile Strength 抗拉强度 	Indicates the maximum axial load the screw can bear. Excessively high tensile strength may lead to core brittleness. 表示螺钉在受拉时的最大承载能力，过高可能导致芯部脆性增加。
Shear Strength 抗剪强度 	Represents the screw's resistance to fracture under transverse loading, which is a critical performance indicator in metal-to-metal sheet connections. 表示螺钉在横向受力条件下的抗断裂能力，是金属与金属板材连接口的关键性能指标。
Torsional Strength 扭转强度 	Indicates torque resistance during installation to avoid snapping or stripping. 表示在打入过程中螺钉对扭矩的承受能力，防止打断或滑牙。

直径 (mm)	规格 (#-TPI)	Shear 剪切 (N)	Tensile 拉伸 (N)	Torsional 扭转 (N·m)
4.8	#10-24	6800	11400	8.6
5.5	#12-14	8800	15300	13.2
5.5	#12-24	9000	16700	13.5
6.3	#14-14	11100	20500	19.6
SST 5.5	#12-14	8500	12300	11.5
SST 6.3	#14-14	9400	15700	15.0

The three mechanical performance indicators—tensile strength, shear strength, and torsional strength—must be carefully balanced in design, rather than optimized individually. Excessively increasing surface hardness to improve tensile strength may cause the screw core to become overly hard and brittle, leading to a higher risk of torsional breakage during installation.

A high-quality self-drilling screw should feature an "hard outer layer with a tough core" structure, allowing efficient penetration of the substrate while reducing the risks of fracture or thread stripping.

这三个机械性能指标——抗拉强度、抗剪强度和扭转强度——需要进行平衡设计，并非单一数值越高越好。若追求极高的表面硬度来提升抗拉强度，可能会导致芯部过硬而变脆，螺钉在安装过程中容易扭断。

优质的自钻自攻螺钉应具备“外硬内韧”的结构特性，既能高效穿透基材，又不易发生断裂或滑牙。



Buidex® Screw Advantages: Engineered for Safety and Strength Buildex® 螺钉优势：为安全与强度而生



Buildex® screws are designed to provide superior strength and safety through advanced heat treatment, ensuring resistance to brittle fracture—a common issue in non-compliant products that often break during bending. Unlike those, Buildex® screws can bend up to 45° without breaking, significantly enhancing installation safety. The screws feature a high-hardness surface for excellent wear and corrosion resistance, while maintaining excellent core toughness for durability and impact absorption, following the principle of "inner softness." Strict adherence to international standards ensures the screw core and surface hardness stay within the optimal 320–400 HV10 range. Exceeding this range can lead to brittle failure, so maintaining this hard balance is crucial for ensuring structural integrity and long-term performance.

Buildex®螺钉通过先进的热处理工艺，避免常见的脆性断裂问题，这种问题在非合规产品中尤为常见，且容易在弯曲过程中断裂。与之不同，Buildex®螺钉可自由弯曲至45°，显著提升安装安全性。螺钉表面具有高硬度，提供优异的耐磨和抗腐蚀性能力，同时保持核心良好的韧性，确保耐久性和抗冲击性，符合“外刚内柔”的设计理念。通过严格遵循国际标准，Buildex®确保螺钉的芯部硬度保持在320–400 HV10的最佳范围内，超过该范围会导致脆性失效，因此保持这一硬度平衡，确保结构完整性和长期性能至关重要。



"Hardness out of specification" refers to the surface or core hardness of a screw exceeding the limits defined by applicable standards.

According to ISO 10666:1999 and GB/T 3098.11-2002, the core hardness of self-drilling screws shall be maintained within the range of 320~400 HV (measured using HV5 or HV10, depending on screw size).

When the core hardness exceeds 400 HV, the screw may exhibit insufficient toughness, increasing the risk of brittle fracture or torsional failure during installation, and potentially leading to higher hydrogen embrittlement sensitivity, particularly under improper plating or pickling conditions.

"硬度超标"是指螺钉的表面或芯部硬度超出相关标准所规定的范围。

根据 ISO 10666:1999 和 GB/T 3098.11-2002 的要求, 自钻自攻螺钉的芯部硬度应控制在320~400 HV范围内 (按螺钉规格分别采用 HV5 或 HV10)。

当芯部硬度超过400 HV时, 螺钉韧性可能不足, 在安装过程中更容易发生脆断或扭断, 并可能提高材料对氢脆的敏感性, 尤其在存在电镀、酸洗等工艺条件下。



3

Basic Screw Selection Guide

选型概览

General Selection Principles for
Self-Drilling and Self-Tapping Screws
自钻自攻螺钉选型指南

Standard for Determining Corrosion Level

腐蚀等级判定标准

Internationally, the ISO 9223:2012 "Corrosion of Metals and Alloys — Classification of Atmospheric Corrosivity" standard is commonly used to define the corrosion levels of environments. In short, this standard determines the corrosivity of an environment by measuring the corrosion rate of common metals in atmospheric conditions. The corresponding standard in China is GB/T 19292-2003 "Classification of Atmospheric Corrosivity of Metals and Alloys". This series of standards provides detailed guidance on the classification of corrosion for various metals and alloys, categorizing environmental corrosivity levels based on corrosion rates to ensure the selection of appropriate corrosion-resistant fasteners.

国际上普遍采用ISO 9223:2012《金属和合金的耐腐蚀性 大气腐蚀性分类》标准来界定环境的腐蚀等级。简而言之，该标准通过衡量常见金属在大气环境中的腐蚀速率，从而确定环境的腐蚀性级别。这一国际标准在中国的对应标准为GB/T 19292-2003《金属和合金的大气腐蚀性分类》。该系列标准对各类金属及合金的腐蚀分类提供了详细的指导，依据腐蚀速率划分不同的环境腐蚀等级，以确保选用合适的防腐蚀紧固件。

大气腐蚀性分级表格

等级	腐蚀性
C1	很低
C2	低
C3	中等
C4	高
C5	很高
CX	极高



Buildex Screw Head Types and Their Applications

Buildex 螺钉头型英中对照及应用范围

Name 名称	Main Application 主要应用范围
Hex Head 六角头 	This head style is used for a broad range of applications including roofing, cladding and timber fabrication, and comes in a range of gauges for heavier duty applications. 这类螺钉头型广泛应用于屋面、墙面板及木结构制造等领域，并提供多种规格号径，以满足更高强度的应用需求。
BattenZips Head 	Mainly used for batten and purlin fixing in roofing and walling systems. Suitable for connecting steel sheets to steel structures, ensuring secure performance under wind loads and other external forces. 这种头型专为屋面和墙面系统中的檩条 (Batten/Purlin) 固定而设计。它在钢板与钢结构的连接中提供强大的握持力，确保在风吸力和其他外力作用下依然保持牢固可靠。
Bugle Head 喇叭头 	In the smaller gauges up to 8-gauge, this head style is generally used for plasterboard as it does not damage the face of the sheet. The 14-gauge screws with this head style are often used for landscaping and fixing heavy duty decking boards. 在较小规格 (至8号规) 时，这种螺钉头型通常用于石膏板安装，因为它不会破坏板材表面。而在14号规的大规格中，这种头型的螺钉则常用于园林景观及重型地板的固定。
Counter-sunk Head 沉头 	This head style is generally used with screws that are fixing steel, where a countersunk recess has been pre-drilled. 这种头型通常用于在钢材上预先钻有沉孔时配合螺钉进行固定。
FibreTeks Head 	Specially designed for fibre cement cladding and roofing sheets, ensuring secure fastening without damaging the substrate. 专为纤维水泥外墙板、屋面板等材料设计，确保固定牢固且不损伤基材。
Deep-King Head 方形头 	High-strength structural fastening with an anti-slip design, commonly used in woodworking, heavy-duty furniture, and construction applications where strength and durability are critical. 高强度结构紧固，防滑设计。常用于木工、重型家具、建筑结构等对强度和耐久性要求较高的领域。
PAN HEAD 圆盘头 / 圆头 	This head style is used with general purpose fasteners for fixing thin steel to steel or timber substrate. 这种螺钉头型常用于通用紧固件，可用于将薄钢板固定到钢材或木质基材上。
Wafer Head 薄盘头 / 薄圆盘头 	This head style is mainly used for fixing a variety of generally lighter materials to a steel or timber substrate. 这种螺钉头型主要用于将各种较轻的材料固定到钢材或木质基材上。

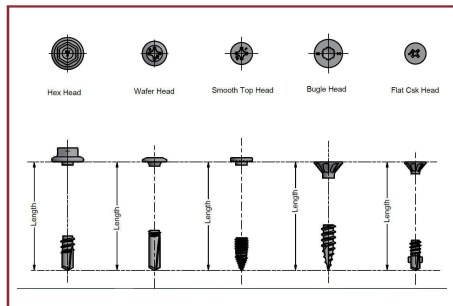
Bit Types Comparison & Applications

批头类型对照及用途说明

Installation Tools 安装工具	Main Applications 主要用途
Hex Socket 六角套筒 	Driving hex head screws (5G-14G) 驱动六角头螺钉 (5G-14G)
Phillips Cross Recess Driver Bit 十字槽批头 	Commonly used for pan head and bugle head screws 常用于扁头、喇叭头
HeadLok Driver Bit HeadLok 专用批头 	Drives HeadLok deep-drive screws with anti-slip design 驱动 HeadLok 深型螺钉, 防滑脱设计
5.0 mm Hex Driver Bit 5.0mm 六角批头 	Specially designed for Bugle Batten screws 专用于喇叭头螺钉
Number 2 Square Driver Bit 2号方槽批头 	Compatible with square drive screws (e.g., Deep-King) 与 Square Drive (如 Deep-King) 配套
6-lobe Driver Bit 内梅花批头 	Used for 6-lobe recess screws 用于驱动内梅花/六角星形槽螺钉

Screw Length Measurement

螺钉长度测量



Notes:

With Hex Heads, Wafer or Smooth Top Heads the product length is measured from underneath the head.
With Bugle, Flat Csk with Ribs Heads or Dec-king the product length is measured over the top of the head.

注释:

对于六角头、圆盖头 (Wafer) 或光滑顶部头型 (Smooth Top), 产品长度从头部下方开始测量。
对于喇叭头 (Bugle)、布加通筋沉头 (Flat Csk with Ribs) 或Dec-king类型, 产品长度从头部顶部开始测量。



Buildex Available Point Types

螺钉钻头类型对照表

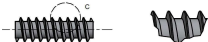
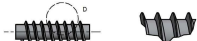


Point Type 钻头类型		Application 用途说明
Zips Point Zips 钻头		Timber and Light Gauge Steel 木材和轻型钢材
Type 17 Point Type 17 钻头		Timber 木材
GX Self Tapping Point GX 自攻钻头		Pre-punched steel frame housing sections 预冲孔的钢结构框架
Needle Point 针型钻头		Chipboard, plywoco, MDF and other indoor timber 刨花板、胶合板、中密度纤维板及其他室内木材
Teks Point Teks 钻头		Steel Section 0.75 mm to 6.5 mm 钢材厚度 0.75 至 6.5 毫米
Series 500 / 900 Teks Point 五号尾 / 九号尾 Teks 钻头		Steel Section 3.0 mm to 20.0 mm 钢材厚度 3.0 至 20.0 毫米
Wing Teks 带翼钻头		Timber fixed to steel 木材固定于钢材

Thread Types

螺纹类型对照表

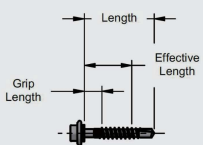


Thread Type 螺纹类型	Description 用途/特点说明
Coarse Thread 粗牙螺纹 	Fast driving speed, ideal for wood and soft materials. 拧入速度快, 适用于木材等软质材料。
Fine Thread 细牙螺纹 	Greater holding power in thin or hard materials. 握紧力强, 适用于较薄或硬质材料。
Buttress Thread 斜方螺纹 / 扶壁螺纹 	Designed for high axial loads in one direction. 单向承载能力强, 常用于结构受力件。
Hi Grip Thread 高握力螺纹 	Deep and aggressive thread profile for superior pull-out strength. 螺纹深, 抗拔力强。
Trustite Thread Trustite 密扣防松螺纹 	Lightly spaced threads for light gauge steel. Specifically engineered by Buldex for thin steel, this thread profile delivers superior holding power and anti-loosening performance. 螺距密, 适用于薄钢材, 具备良好防松性能。Buldex为薄钢材设计的螺纹结构, 具有优异的握持力与防松动性能。

Length Selection Descriptions

螺钉长度选型说明





Length Descriptions

- **Length(L):** The overall length of the screw from the tip to the underside of the head.
- **Grip Length(GL):** The portion of the screw designed to penetrate and clamp the materials being fastened.
- **Effective Length(EL):** The threaded portion of the screw that embeds into the base material to provide holding power.

- **总长度(L):** 螺钉从尖端到头部下缘的整体长度
- **夹持长度(GL):** 用于穿透并夹紧板材的长度
- **有效咬合长度(EL):** 实际进入基层材料并提供胶合作用的螺纹长度

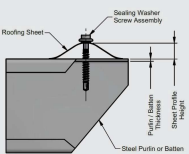
Screw Selection without Insulation.

无保温层时的螺钉选型



- **The Grip Length (GL):** must be equal to or shorter than the Profile Height.
- **The Effective Length (EL):** must be equal to or longer than the Profile Height and the Purlin / Batten Thickness combined.

- **夹持长度 (GL) :** 应等于或小于板材波峰高度 (Profile Height) 。
- **有效咬合长度 (EL) :** 应等于或大于板材波峰高度与檩条 / 木龙骨厚度之和。

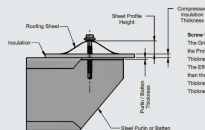


Screw Selection with Insulation.

带保温材料时的螺钉选型

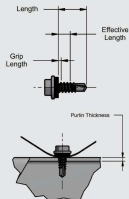


- The Grip Length (GL): must be equal to or shorter than the Profile Height and the Compressed Insulation Thickness Combined.
- The Effective Length (EL): must be equal to or longer than the Profile Height, the Purlin / Batten Thickness and the Compressed Insulation Thickness combined.
- 夹持长度(GL): 必须小于或等于板型高度与压缩后的保温层厚度之和。
- 有效长度(EL): 必须大于或等于板型高度、檩条/木条厚度与压缩后的保温层厚度之和。



Length Descriptions

螺钉长度说明



- Length(L): The overall length of the screw from the tip to the underside of the head.
- Grip Length(GL): The portion of the screw designed to penetrate and clamp the materials being fastened.
- Effective Length(EL): The threaded portion of the screw that actually embeds into the base material to provide holding power.
- 总长度(L): 螺钉从尖端到头部下缘的整体长度
- 夹持长度(GL): 用于穿透并夹紧板材的长度
- 有效咬合长度(EL): 实际进入基层材料并提供咬合作用的螺纹长度

Valley Fixing Screw Selection

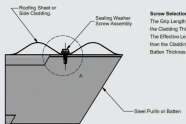
波谷固定螺钉选型

- **The Grip Length (GL):** must be equal to or shorter than the Cladding Thickness.

- **The Effective Length (EL):** must be equal to or longer than the Cladding Thickness and the Purlin / Batten Thickness combined.

- **夹持长度(GL):** 应等于或小于板材厚度。

- **有效咬合长度(EL):** 应等于或大于板材厚度与檩条 / 龙骨厚度之和。



Buildex Screw Coding Principles

标的®螺钉编码原则

CTEKS 12-14×55

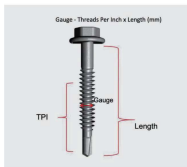
- CTEKS = Climaseal®3 coating with TEKS drilling point
- 12 = Screw nominal outside diameter (Gauge 12), approx. 5.5 mm
- 14 = Threads per inch (TPI), coarse thread, commonly used in steel self-drilling screws
- 55 = Screw length in millimetres (55 mm)

FTEKS 14-14×75

- FTEKS = Climaseal®4+ coating with TEKS drilling point
- 14 = Screw nominal outside diameter (Gauge 14), approx. 6.3 mm
- 14 = Threads per inch (TPI)
- 75 = Screw length in millimetres (75 mm)

CTEKS 12-14×55

- CTEKS = 带TEKS钻头的刻力封®3级涂层
- 12 = 螺钉的标称外径 (12号规), 约5.5mm外径
- 14 = 螺纹牙数 (每英寸14个牙, TPI), 属于粗牙, 在钢结构自钻螺钉中常见
- 55 = 螺钉长度, 单位为毫米 (55mm)



FTEKS 14-14×75

- FTEKS = 带TEKS钻头的刻力封®4+涂层
- 14 = 螺钉的标称外径 (14号规), 约6.3mm外径
- 14 = 螺纹牙数 (每英寸14个牙, TPI)
- 75 = 螺钉长度, 单位为毫米 (75mm)

Buildex® Climaseal® 3 Selection Guide

标的®刻力封®3级产品选型概览

Fixing Type 安装类型	Diameter 直径	Self-drilling Capability 自钻力	Length 长度	Fixing Thickness 有效固定厚度	Washer 垫片	Specification 螺钉规格	Features & Certification 产品特性及认证
Stitching 边缘缝合 	6.8 mm / 15g	2.4 mm	20 mm	≤ 6 mm	EPDM 10.5 mm	OMBT 15-15x20 WHFS	CE
Valley fixing 波谷固定 	5.5 mm / 12g	6.5 mm	20 mm	≤ 6 mm	EPDM 10.5 mm	CTEKS 12-14x20 HWFS	CE, FM
		6.5 mm	30 mm	≤ 16 mm	EPDM 10.5 mm	CTEKS 12-14x30 HWFS	CE, FM
		6.5 mm	38 mm	≤ 24 mm	EPDM 10.5 mm	CTEKS 12-14x38 HWFS	CE, FM
		6.5 mm	45 mm	≤ 31 mm	EPDM 10.5 mm	CTEKS 12-14x45 HWFS	CE, FM
Crest fixing 波峰固定 	5.5 mm / 12g	6.5 mm	50 mm	22-56 mm	EPDM 10.5 mm	CTEKS 12-14x50 HGS	CE, FM
		6.5 mm	55 mm	28-41 mm	EPDM 10.5 mm	CTEKS 12-14x55 HGS	CE, FM
		6.5 mm	68 mm	34-54 mm	EPDM 10.5 mm	CTEKS 12-14x68 HGS	CE, FM
		6.5 mm	75 mm	34-61 mm	EPDM 10.5 mm	CTEKS 12-14x75 HGS	CE, FM
		6.5 mm	95 mm	50-81 mm	EPDM 10.5 mm	CTEKS 12-14x95 HGS	CE, FM
		6.5 mm	110 mm	55-96 mm	EPDM 10.5 mm	CTEKS 12-14x110 HGS	CE, FM
		6.5 mm	125 mm	68-111 mm	EPDM 10.5 mm	CTEKS 12-14x125 HGS	CE, FM
Thick Purlin Fixing 厚檩条固定 	5.5 mm / 12g	12.5 mm	38 mm	≤ 16 mm	EPDM 10.5 mm	CTEK 5 12-24x38 HWFS	CE
		12.5 mm	50 mm	≤ 28 mm	EPDM 10.5 mm	CTEK 5 12-24x50 HWFS	CE
		12.5 mm	70 mm	18-46 mm	EPDM 10.5 mm	CTEK 5 12-14x70 HWFS	CE
		20 mm	60 mm	≤ 28 mm	EPDM 10.5 mm	CTEK 9 12-24x60 HWFS	CE
Bracket Fixing 固定座固定 	4.8 mm / 10g	4.5 mm	16 mm	≤ 5 mm	None 无	MTEKS 10-24x16 WAF	CE
		4.5 mm	22 mm	≤ 12 mm	None 无	MTEKS 10-24x22 WAF	CE
		4.5 mm	30 mm	≤ 20 mm	None 无	MTEKS 10-24x30 WAF	CE
		4.5 mm	40 mm	≤ 30 mm	None 无	MTEKS 10-24x40 WAF	CE
Fixing 坡角固定 	6.3 mm / 14g 5.5 mm / 12g	2.4 mm	19 mm	≤ 6 mm	Composite washer 10.5 mm 复合垫圈	T-TEKS 1/4-14x3/4" BW	CE
		6.0 mm	25 mm	≤ 10 mm	Composite washer 10.5 mm 复合垫圈	T-TEKS 12-14x1" BW	CE
		6.0 mm	32 mm	≤ 17 mm	Composite washer 10.5 mm 复合垫圈	T-TEKS 12-14x1-1/4" BW	CE
		6.0 mm	38 mm	≤ 23 mm	Composite washer 10.5 mm 复合垫圈	T-TEKS 12-14x1-1/2" BW	CE
		6.0 mm	45 mm	≤ 30 mm	Composite washer 10.5 mm 复合垫圈	T-TEKS 12-14x1-3/4" BW	CE
Cement Board Fixing 水泥板固定 	4.8 mm / 10g 5.5 mm / 12g	4.8 mm	32 mm	≤ 17 mm	None 无	DTEKS 10-16x32 CSK RIB	CE
		4.8 mm	45 mm	≤ 30 mm	None 无	DTEKS 10-16x45 CSK RIB	CE
		5.3 mm	65 mm	≤ 50 mm	None 无	DTEKS 12-14x65 CSK RIB	CE

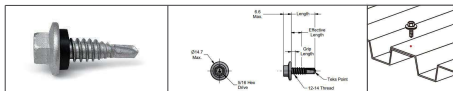
The above includes commonly stocked products. For more specifications or model selection support, please contact your local sales representative or distributor.

以上为部分常备库存产品，如需更多产品类型或选型支持，请咨询当地销售或经销商。

Stitching Screw

边缘缝合钉

Climased®3 + EPDM sealing with balanced hardness for durable fastening and reduced galvanic corrosion risk. 聚力封®3 级防腐与EPDM密封体系, 配合硬度匹配设计, 提升耐久性并有助于降低电偶腐蚀风险。



Certifications and Test Reports: CE; test reports issued by ilac-MRA CNAS-accredited laboratories.
认证及测试报告: CE; ilac-MRA CNAS认证实验室出具检测报告。

Material

- Screw: Carbon steel (SAE 1022)
- Washer: EPDM sealing washer; insulation $\geq 2,000 \text{ M}\Omega @ 1,000 \text{ V}$; helps reduce galvanic corrosion risk

材料

- 螺钉: SAE 1022 碳钢
- 垫片: EPDM密封垫; 绝缘电阻 $\geq 2000 \text{ M}\Omega (1000 \text{ V})$; 有助于降低电偶腐蚀风险

Coating

- Climased®3

涂层

- 聚力封®3

Corrosion Tests

- Neutral salt spray (NSS): $\geq 1,500 \text{ h}$ (ASTM B117)
- Kesternich (acid-rain): 2.0L $\text{SO}_2 \geq 20$ cycles (DIN 50018 2.05)

防腐测试

- 中性盐雾 (NSS): ≥ 1500 小时 (ASTM B117)
- 酸雨 (Kesternich): 2.0L $\text{SO}_2 \geq 20$ 个周期 (DIN 50018 2.05)

Hardness

- Core: 320~400 HV10
- Surface: $\geq 530 \text{ HV0.3}$

硬度

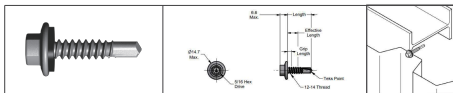
- 芯部: 320~400 HV10
- 表面: $\geq 530 \text{ HV0.3}$

Diameter 直径	Self-drilling Capability 自钻力	Length 长度 (L)	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Headmark 头标
6.6mm	2.4mm	20mm	$< 6.0 \text{ mm}$	EPDM 10.5 mm	CMB1-15-BX 20 HWFS	CE	BX

Valley fixing

波谷固定

Climaseal®3 + EPDM sealing with balanced hardness for durable fastening and reduced galvanic corrosion risk.
刻力封®3 级防腐与EPDM密封体系, 配合硬度匹配设计, 提升耐久性并有助于降低电偶腐蚀风险。



Certifications and Test Reports: CE, FM; test reports issued by ilac-MRA CNAS-accredited laboratories.
认证及测试报告: CE, FM; ilac-MRA CNAS认证实验室出具检测报告。

Material

- Screw: Carbon steel (SAE 1022)
- Washer: EPDM sealing washer; insulation $\geq 2,000 \text{ M}\Omega @ 1,000 \text{ V}$; helps reduce galvanic corrosion risk

材料

- 螺钉: SAE 1022碳钢
- 垫片: EPDM 密封垫; 绝缘电阻 $\geq 2000 \text{ M}\Omega (1000 \text{ V})$; 有助于降低电偶腐蚀风险

Coating

- Climaseal®3

涂层

- 刻力封®3

Corrosion Tests

- Neutral salt spray (NSS): $\geq 1,500 \text{ h}$ (ASTM B117)
- Kesternich (acid-rain): 2.0L $\text{SO}_2 \geq 20$ cycles (DIN 50018 2.0S)

防腐测试

- 中性盐雾 (NSS): ≥ 500 小时 (ASTM B117)
- 酸雨 (Kesternich): 2.0L $\text{SO}_2 \geq 20$ 个周期 (DIN 50018 2.0S)

Hardness

- Core: 320–400 HV10
- Surface: $\geq 550 \text{ HV0.3}$

硬度

- 芯部: 320–400 HV10
- 表面: $\geq 550 \text{ HV0.3}$

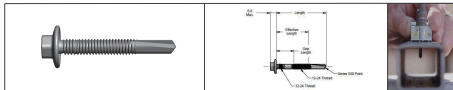
Diameter 直径	Self-drilling Capability 自钻力	Length 长度 (L)	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Head- mark 头标
5.5 mm/12g	6.5mm	20mm	$\leq 6\text{mm}$	EPDM 10.5mm	CTEKS 12-14x20 HWFS	CE, FM	BX
	6.5mm	30mm	$\leq 16\text{mm}$	EPDM 10.5mm	CTEKS 12-14x30 HWFS	CE, FM	BX
	6.5mm	38mm	$\leq 24\text{mm}$	EPDM 10.5mm	CTEKS 12-14x38 HWFS	CE, FM	BX
	6.5mm	45mm	$\leq 31\text{mm}$	EPDM 10.5mm	CTEKS 12-14x45 HWFS	CE, FM	BX

Thick Purlin Fixing

厚檩条固定

Enhanced drilling for thicker purlins, with Climoseal®3 + EPDM sealing and balanced hardness—durable fastening and reduced galvanic corrosion risk.

更强厚度条件下钻铆力+刻力封®3级防腐与EPDM密封体系，配合硬度匹配设计，耐久可靠并有助于降低电偶腐蚀风险。



Certifications and Test Reports: CE; test reports issued by Ilac-MRA CNAS-accredited laboratories.

认证及测试报告: CE; Ilac-MRA CNAS认证实验室出具检测报告。

Material

- Screw: Carbon steel (SAE 1022)
- Washer: EPDM sealing washer; insulation $\geq 2,000 \text{ M}\Omega @ 1,000 \text{ V}$; helps reduce galvanic corrosion risk

材料

- 螺钉: SAE 1022碳钢
- 垫片: EPDM 密封胶垫; 绝缘电阻 $\geq 2000 \text{ M}\Omega (1000\text{V})$; 有助于降低电偶腐蚀风险

Coating

- Climoseal®3

涂层

- 刻力封®3

Corrosion Tests

- Neutral salt spray (NSS): $\geq 1,500\text{h}$ (ASTM B117)
- Kesternich (acid-rain): 2.0L $\text{SO}_2 \geq 20$ cycles (DIN 50018 2.05)

防腐测试

- 中性盐雾 (NSS): ≥ 1500 小时 (ASTM B117)
- 酸雨 (Kesternich): 2.0L $\text{SO}_2 \geq 20$ 个周期 (DIN 50018 2.05)

Hardness

- Core: 320–400 HV10
- Surface: $\geq 550 \text{ HV}0.5$

硬度

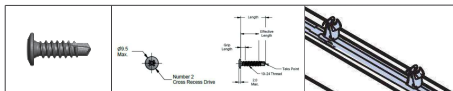
- 芯部: 320–400 HV10
- 表面: $\geq 550 \text{ HV}0.5$

Diameter 直径	Self-drilling Capability 自钻力	Length (L) 长度 (L)	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Head- mark 头标
5.5 mm/12g	12.5 mm	38 mm	$< 16 \text{ mm}$	EPDM 10.5 mm	CTEK 5124438-HMFS	CE	BX
	12.5 mm	50 mm	$< 28 \text{ mm}$	EPDM 10.5 mm	CTEK 5125450-HMFS	CE	BX
	12.5 mm	70 mm	18–46 mm	EPDM 10.5 mm	CTEK 5124470-HMFS	CE	BX
	20 mm	60 mm	$< 28 \text{ mm}$	EPDM 10.5 mm	CTEK 9125460-HMFS	CE	BX

Bracket Fixing

固定座固定

Climased®3 with balanced hardness for durable fastening and reduced galvanic corrosion risk.
 聚力封®3级防腐配合硬度匹配设计,提升耐久件并有助于降低腐蚀风险。



Certifications and Test Reports: CE; test reports issued by idc-MRA CNAS-accredited laboratories.
认证及测试报告: CE; idc-MRA CNAS认证实验室出具检测报告。

Material

• Screw: Carbon steel (SAE 1022)

材料

• 螺钉: SAE 1022 碳钢

Coating

• Climased®3

涂层

• 聚力封®3

Corrosion Tests

• Neutral salt spray (NSS): ≥ 500 h (ASTM B117)
 • Kesternich (acid-rain): 2.0L SO_2 ≥ 20 cycles (DIN 50018 2.0S)

防腐测试

• 中性盐雾 (NSS): ≥ 500 小时 (ASTM B117)
 • 酸雨 (Kesternich): 2.0L SO_2 ≥ 20 个周期 (DIN 50018 2.0S)

Hardness

• Core: 520~400 HV10
 • Surface: ≥ 530 HV0.3

硬度

• 芯部: 520~400 HV10
 • 表面: ≥ 530 HV0.3

Diameter 直径	Self-drilling Capability 自钻力	Length (L) 长度 (L)	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Head- mark 头标
4.8 mm/10g	4.5 mm	16 mm	≤ 5 mm	None 无	MTEKS 10-24x16 WAF	CE	BX
	4.5 mm	22 mm	≤ 12 mm	None 无	MTEKS 10-24x22 WAF	CE	BX
	4.5 mm	50 mm	≤ 20 mm	None 无	MTEKS 10-24x50 WAF	CE	BX
	4.5 mm	40 mm	≤ 30 mm	None 无	MTEKS 10-24x40 WAF	CE	BX

Structural fixing

结构固定

Climaseal®3 + EPDM sealing with balanced hardness for durable fastening and reduced galvanic corrosion risk. 刻力封®3 级防腐与 EPDM 密封体系, 配合硬度匹配设计, 提升耐久性并有助于降低电偶腐蚀风险。



Certifications and Test Reports: CE; test reports issued by Ilac-MRA CNAS-accredited laboratories.
认证及测试报告: CE; Ilac-MRA CNAS 认证实验室出具检测报告。

Material

- Screw: Carbon steel (SAE 1022)
- Washer: EPDM sealing washer; insulation $\geq 2,000 \text{ M}\Omega @ 1,000 \text{ V}$; helps reduce galvanic corrosion risk

材料

- 螺钉: SAE 1022 碳钢
- 垫片: EPDM 密封胶; 绝缘电阻 $\geq 2000 \text{ M}\Omega (1000 \text{ V})$; 有助于降低电偶腐蚀风险

Coating

- Climaseal®3

涂层

- 刻力封®3

Corrosion Tests

- Neutral salt spray (NSS): $\geq 1,500 \text{ h}$ (ASTM B117)
- Kesternich (acid-rain): $2.0 \text{ L SO}_2 \geq 20 \text{ cycles}$ (DIN 50018 2.0S)

防腐测试

- 中性盐雾 (NSS): $\geq 1500 \text{ 小时}$ (ASTM B117)
- 酸雨 (Kesternich): $2.0 \text{ L SO}_2 \geq 20 \text{ 个周期}$ (DIN 50018 2.0S)

Hardness

- Core: 320–400 HV10
- Surface: $\geq 550 \text{ HV0.3}$

硬度

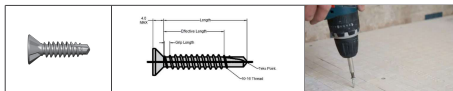
- 芯部: 320–400 HV10
- 表面: $\geq 550 \text{ HV0.3}$

Diameter 直径	Self-drilling Capability 自钻力	Length (L) 长度 (L)	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Head- mark 头标
6.3 mm/14g	2.4 mm	19 mm	$\leq 6 \text{ mm}$	Composite washer 10.5mm 复合垫圈	T-HKS M6-14× 3/4" BW	CE	BX
	6.0 mm	25 mm	$\leq 10 \text{ mm}$	Composite washer 10.5mm 复合垫圈	T-HKS T-14× 1" BW	CE	BX
	6.0 mm	32 mm	$\leq 17 \text{ mm}$	Composite washer 10.5mm 复合垫圈	T-TBS T-14× 1 1/4" BW	CE	BX
5.5 mm/12g	6.0 mm	38 mm	$\leq 23 \text{ mm}$	Composite washer 10.5mm 复合垫圈	T-TBS T-14× 1 1/2" BW	CE	BX
	6.0 mm	45 mm	$\leq 30 \text{ mm}$	Composite washer 10.5mm 复合垫圈	T-TBS T-14× 1 3/4" BW	CE	BX

Cement Board Fixing

水泥板固定

Climaseal®3 with balanced hardness for durable fastening and reduced galvanic corrosion risk.
 刻力封®3级防腐配合硬度匹配设计, 提升耐久性并有助于降低腐蚀风险。



Certifications and Test Reports: CE; test reports issued by ilac-MRA CNAS-accredited laboratories.
认证及测试报告: CE; ilac-MRA CNAS认证实验室出具检测报告。

Material

- Screw: Carbon steel (SAE 1022)
- 材料**
- 螺钉: SAE 1022 碳钢

Coating

- Climaseal®3
- 涂层**
- 刻力封®3

Corrosion Tests

- Neutral salt spray (NSS): ≥1,500 h (ASTM B117)
- Kesternich (acid-rain): 2.0L SO₂ ≥20 cycles (DIN 50018 2.0S)

防腐测试

- 中性盐雾 (NSS): ≥1500 小时 (ASTM B117)
- 酸雨 (Kesternich): 2.0L SO₂ ≥20个周期 (DIN 50018 2.0S)

Hardness

- Core: 320~400 HV10
- Surface: ≥530 HV0.3

硬度

- 芯部: 320~400 HV10
- 表面: ≥530 HV0.3

Diameter 直径	Self-drilling Capability 自钻力	Length 长度 (L)	Fixing Thickness 有效固定厚度	Washer 垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Head- mark 头标
4.8 mm/10g	4.8 mm	32 mm	≤ 17 mm	None无	DTEKS 10-16×32 CSK RB	CE	BX
	4.8 mm	45 mm	≤ 30 mm	None无	DTEKS 10-16×45 CSK RB	CE	BX
5.5 mm/12g	5.3 mm	65 mm	≤ 50 mm	None无	DTEKS 10-16×65 CSK RB	CE	BX

Buildex® Climaseal® 4+ Selection Guide

标的®刻力封® 4+选型概览

Fixing Type 安装类型	Diameter 直径	Self-drilling Capability 自钻力	Length 长度	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证
Stitching 边缘缝合 	6.8mm/15g	2.4 mm	20mm	< 6 mm	EPDM 10.5 mm	PM/BT 15-15x20 HWFS	CE
Valley fixing 沟谷固定 	5.5mm/12g	6.5mm	20 mm	<6 mm	EPDM 10.5 mm	FTEKS 12-14x20 HWFS	CE, FM
		6.5mm	25 mm	<11 mm	EPDM 10.5 mm	FTEKS 12-14x25 HWFS	CE, FM
		6.5mm	30 mm	<16 mm	EPDM 10.5 mm	FTEKS 12-14x30 HWFS	CE, FM
		6.5mm	38 mm	<24 mm	EPDM 10.5 mm	FTEKS 12-14x38 HWFS	CE, FM
		6.5mm	45 mm	<31 mm	EPDM 10.5 mm	FTEKS 12-14x45 HWFS	CE, FM
Crest fixing 波峰固定 	5.5mm/12g	6.5mm	50 mm	22-36 mm	EPDM 10.5 mm	FTEKS 12-14x50 HGS	CE, FM
		6.5mm	55 mm	28-41 mm	EPDM 10.5 mm	FTEKS 12-14x55 HGS	CE, FM
		6.5mm	55 mm	<41 mm	EPDM 10.5 mm	FTEKS 12-14x55 HWFS	CE, FM
		6.5mm	68 mm	34-54 mm	EPDM 10.5 mm	FTEKS 12-14x68 HGS	CE, FM
	6.3mm/14g	6.5mm	75 mm	34-61 mm	EPDM 10.5 mm	FTEKS 14-14x75 HWFS	CE, FM
		6.5mm	95 mm	50-81 mm	EPDM 10.5 mm	FTEKS 14-14x95 HWFS	CE, FM
		6.5mm	110 mm	55-96 mm	EPDM 10.5 mm	FTEKS 14-14x110 HWFS	CE, FM
		6.5mm	125 mm	68-111 mm	EPDM 10.5 mm	FTEKS 14-14x125 HWFS	CE, FM
		6.5mm	150 mm	95-135 mm	EPDM 10.5 mm	FTEKS 14-14x150 HWFS	CE, FM
		6.5mm	175 mm	106-161 mm	EPDM 10.5 mm	FTEKS 14-14x175 HWFS	CE, FM
		6.5mm	175 mm	< 16 mm	EPDM 10.5 mm	FTEK 5 12-24x38 HWFS	CE
Thick Putty Fixing 厚胶浆固定	5.5mm/12g	12.5 mm	38 mm	< 16 mm	EPDM 10.5 mm	FTEK 5 12-24x38 HWFS	CE

The above includes commonly stocked products. For more specifications or model selection support, please contact your local sales representative or distributor.

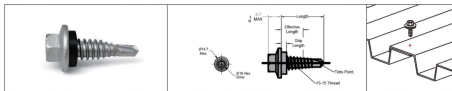
以上为部分常备库存产品, 如需更多产品型号或选型支持, 请咨询当地销售或经销商。

Stitching Screw

边缘缝合钉

Upgraded Climaseal®4+ coating with EPDM sealing and balanced hardness for enhanced durability and reduced galvanic corrosion risk.

升级刻力封®4+ 级涂层与 EPDM 密封体系, 配合硬度匹配设计, 提升耐久性并有助于降低电偶腐蚀风险。



Certifications and Test Reports: CE; test reports issued by ilac-MRA CNAS-accredited laboratories.

认证及测试报告: CE; ilac-MRA CNAS认证实验室出具检测报告。

Material

- Screw: Carbon steel (SAE 1022)
 - Washer: EPDM sealing washer; electrical insulation $\geq 2,000 \text{ M}\Omega @ 1,000 \text{ V}$; helps reduce galvanic corrosion risk
- 材料**
- 螺钉: SAE 1022 碳钢
 - 垫片: EPDM 密封垫; 绝缘电阻 $\geq 2000 \text{ M}\Omega (1000 \text{ V})$; 有助于降低电偶腐蚀风险

Coating

- Climaseal®4+

涂层

- 刻力封®4+

Corrosion Tests

- Neutral salt spray (NSS): $\geq 2,500 \text{ h}$ (ASTM B117)
- Kesternich (acid-rain): 2.0L SO_2 ≥ 25 cycles (DIN 50018 2.05)

防腐测试

- 中性盐雾 (NSS): ≥ 2500 小时 (ASTM B117)
- 酸雨 (Kesternich): 2.0L SO_2 ≥ 25 个周期 (DIN 50018 2.05)

Hardness

- Core: 320–400 HV10
- Surface: $\geq 530 \text{ HV0.3}$

硬度

- 芯部: 320–400 HV10
- 表面: $\geq 530 \text{ HV0.3}$

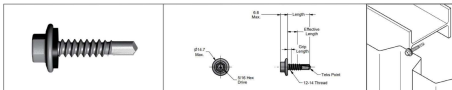
Diameter 直径	Self-drilling Capability 自钻力	Length 长度 (L)	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Headmark 头标
6.5mm	2.4mm	20mm	$< 6.0 \text{ mm}$	E-PM 10.5 mm	HM61 15-15x 20 HWFS	CE	BX 4+

Valley fixing

波谷固定

Upgraded Climaseal®4+ coating with EPDM sealing and balanced hardness for enhanced durability and reduced galvanic corrosion risk.

升级刻力封®4+ 级涂层与 EPDM 密封体系，配合硬度匹配设计，提升耐久性并有助于降低电偶腐蚀风险。



Certifications and Test Reports: CE, FM; test reports issued by ilac-MRA CNAS-accredited laboratories.

认证及测试报告: CE, FM; ilac-MRA CNAS认证实验室出具检测报告。

Material

- Screw: Carbon steel (SAE 1022)
- Washer: EPDM sealing washer; electrical insulation $\geq 2,000 \text{ M}\Omega$ @ 1,000 V; helps reduce galvanic corrosion risk

材料

- 螺钉: SAE 1022碳钢
- 垫片: EPDM密封垫; 绝缘电阻 $\geq 2000 \text{ M}\Omega$ (1000 V); 有助于降低电偶腐蚀风险

Coating

- Climaseal®4+

涂层

- 刻力封®4+级

Corrosion Tests

- Neutral salt spray (NSS): $\geq 2,500 \text{ h}$ (ASTM B117)
- Kesternich (acid-rain): $2.0 \text{ L SO}_2 \geq 25 \text{ cycles}$ (DIN 50018 2.0S)

防腐测试

- 中性盐雾 (NSS): $\geq 2500 \text{ 小时}$ (ASTM B117)
- 酸雨 (Kesternich): $2.0 \text{ L SO}_2 \geq 25 \text{ 个周期}$ (DIN 50018 2.0S)

Hardness

- Core: 320–400 HV10
- Surface: $\geq 550 \text{ HV0.3}$

硬度

- 芯部: 320–400 HV10
- 表面: $\geq 550 \text{ HV0.3}$

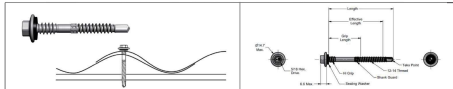
Diameter 直径	Self-drilling Capability 自钻力	Length (L) 长度	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Head- mark 头标
5.5 mm/12g	6.5mm	20mm	$\leq 6 \text{ mm}$	EPDM 10.5mm	FTE/S12-4x20-HWFS	CE, FM	BX 4+
	6.5mm	25mm	$\leq 11 \text{ mm}$	EPDM 10.5mm	FTE/S12-4x25-HWFS	CE, FM	BX 4+
	6.5mm	30mm	$\leq 16 \text{ mm}$	EPDM 10.5mm	FTE/S12-4x30-HWFS	CE, FM	BX 4+
	6.5mm	38mm	$\leq 24 \text{ mm}$	EPDM 10.5mm	FTE/S12-4x38-HWFS	CE, FM	BX 4+
	6.5mm	45mm	$\leq 31 \text{ mm}$	EPDM 10.5mm	FTE/S12-4x45-HWFS	CE, FM	BX 4+

Crest fixing

波峰固定

Upgraded Climaseal®4+ coating with EPDM sealing and balanced hardness for enhanced durability and reduced galvanic corrosion risk.

升级刻力封®4+ 级涂层与 EPDM 密封体系, 配合硬度匹配设计, 提升耐久性并有助于降低电偶腐蚀风险。



Certifications and Test Reports: CE, FM; test reports issued by ilac-MRA CNAS-accredited laboratories.
认证及测试报告: CE, FM; ilac-MRA CNAS认证实验室出具检测报告。

Material

- Screw: Carbon steel (SAE 1022)
- Washer: EPDM sealing washer; electrical insulation $\geq 2,000 \text{ M}\Omega @ 1,000\text{V}$; helps reduce galvanic corrosion risk

材料

- 螺钉: SAE 1022碳钢
- 垫片: EPDM密封垫; 绝缘电阻 $\geq 2000 \text{ M}\Omega (1000 \text{ V})$; 有助于降低电偶腐蚀风险

Coating

- Climaseal®4+

涂层

- 刻力封®4+

Corrosion Tests

- Neutral salt spray (NSS): $\geq 2,500 \text{ h}$ (ASTM B117)
- Kesternich (acid-rain): $2.0\text{L SO}_2 \geq 25$ cycles (DIN 50018 2.0S)

防腐测试

- 中性盐雾 (NSS): ≥ 2500 小时 (ASTM B117)
- 酸雨 (Kesternich): $2.0\text{L SO}_2 \geq 25$ 个周期 (DIN 50018 2.0S)

Hardness

- Core: 320-400 HV10
- Surface: $\geq 530 \text{ HV0.3}$

硬度

- 芯部: 320-400 HV10
- 表面: $\geq 530 \text{ HV0.3}$

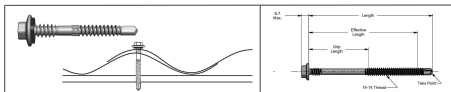
Diameter 直径	Self-drilling Capability 自钻力	Length (L) 长度 (L)	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Head- mark 头标
5.5 mm/12g	6.5mm	50 mm	22-36mm	EPDM 10.5mm	FTEXS1244x50 HGS	CE, FM	BX 4+
	6.5mm	55 mm	28-41mm	EPDM 10.5mm	FTEXS1244x55 HGS	CE, FM	BX 4+
	6.5mm	55 mm	≤ 41 mm	EPDM 10.5mm	FTEXS1244x55 HWS	CE, FM	BX 4+
	6.5mm	68 mm	34-54mm	EPDM 10.5mm	FTEXS1244x68 HGS	CE, FM	BX 4+

Crest fixing

波峰固定

Upgraded CImaseal®4+ coating with EPDM sealing and balanced hardness for enhanced durability and reduced galvanic corrosion risk.

升级刻力封®4+ 级涂层与 EPDM 密封体系, 配合硬度匹配设计, 提升耐久性并有助于降低电偶腐蚀风险。



Certifications and Test Reports: CE, FM; test reports issued by Iac-MRA CNAS-accredited laboratories.
认证及测试报告: CE, FM; Iac-MRA CNAS认证实验室出具检测报告。

Material

- Screw: Carbon steel (SAE 1022)
- Washer: EPDM sealing washer; electrical insulation $\geq 2,000 \text{ M}\Omega @ 1,000 \text{ V}$; helps reduce galvanic corrosion risk

材料

- 螺钉: SAE 1022碳钢
- 垫片: EPDM密封胶垫; 绝缘电阻 $\geq 2000 \text{ M}\Omega (1000 \text{ V})$; 有助于降低电偶腐蚀风险

Coating

- CImaseal®4+

涂层

- 刻力封®4+

Corrosion Tests

- Neutral salt spray (NSS): $\geq 2,500 \text{ h}$ (ASTM B117)
- Kesternich (acid-rain): $2.0 \text{ L SO}_2 \geq 25 \text{ cycles}$ (DIN 50018 2.0S)

防腐测试

- 中性盐雾 (NSS): $\geq 2500 \text{ 小时}$ (ASTM B117)
- 酸雨 (Kesternich): $2.0 \text{ L SO}_2 \geq 25 \text{ 个周期}$ (DIN 50018 2.0S)

Hardness

- Core: $320 \sim 400 \text{ HV}0.3$
- Surface: $\geq 530 \text{ HV}0.3$

硬度

- 芯部: $320 \sim 400 \text{ HV}0.3$
- 表面: $\geq 530 \text{ HV}0.3$

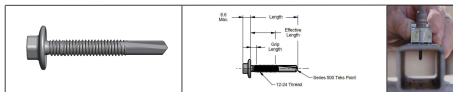
Diameter 直径	Self-drilling Capability 自钻力	Length (L) 长度	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Head- mark 头标
6.3 mm/14g	6.5mm	75mm	34~61mm	EPDM10.5mm	FTEBS144x75HMF5	CE, FM	BX 4+
	6.5mm	95mm	50~81mm	EPDM10.5mm	FTEBS144x95HMF5	CE, FM	BX 4+
	6.5mm	110mm	55~96mm	EPDM10.5mm	FTEBS144x110HMF5	CE, FM	BX 4+
	6.5mm	125mm	68~111mm	EPDM10.5mm	FTEBS144x125HMF5	CE, FM	BX 4+
	6.5mm	150mm	95~135mm	EPDM10.5mm	FTEBS144x150HMF5	CE, FM	BX 4+
	6.5mm	175mm	108~161mm	EPDM10.5mm	FTEBS144x175HMF5	CE, FM	BX 4+

Thick Purlin Fixing

厚檩条固定

Enhanced drilling for thicker purlins, with Climased®4+ coating, EPDM sealing and balanced hardness for enhanced durability and reduced galvanic corrosion risk.

更优厚檩条下钻能力, 升级刻力封®4+ 级涂层, 配合EPDM密封与硬度匹配设计, 提升耐久性并有助于降低电偶腐蚀风险。



Certifications and Test Reports: CE, test reports issued by ilac-MRA CNAS-accredited laboratories.

认证及测试报告: CE, ilac-MRA CNAS认证实验出具报告

Material

- Screw: Carbon steel (SAE 1022)
- Washer: EPDM sealing washer: electrical insulation $>2,000 \text{ M}\Omega$ @1,000 V; helps reduce galvanic corrosion risk

材料

- 螺钉: SAE 1022碳钢
- 垫片: EPDM密封垫; 绝缘电阻 $>2000 \text{ M}\Omega$ (1000 V); 有助于降低电偶腐蚀风险

Coating

- Climased®4+

涂层

- 刻力封®4+

Corrosion Tests

- Neutral salt spray (NSS): $\geq 2,500 \text{ h}$ (ASTM B117)
- Kesternich (acid-rain): $2.0\text{L SO}_2 \geq 25$ cycles (DIN 50018 2.0S)

防腐测试

- 中性盐雾 (NSS): ≥ 2500 小时 (ASTM B117)
- 酸雨 (Kesternich): $2.0\text{L SO}_2 \geq 25$ 个周期 (DIN 50018 2.0S)

Hardness

- Core: 320-400 HV10
- Surface: $\geq 530 \text{ HV0.3}$

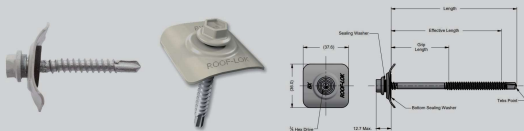
硬度

- 芯部: 320-400 HV10
- 表面: $\geq 530 \text{ HV0.3}$

Diameter 直径	Self-drilling Capability 自钻力	Length 长度 (L)	Fixing Thickness 有效固定厚度	Washer 防水垫片	Specification 螺钉规格	Features & Certification 产品特性及认证	Headmark 头标
5.5mm/12g	12.5mm	38mm	$< 6\text{mm}$	EPDM 10.5 mm	HLK 5 12-24x 38 HWFS	CE	BX 4+

Fastener Requirements for High Wind & Cyclonic Areas

抗台风垫片



Don't let inferior fastening solutions put your roof at risk.
别让劣质的紧固方案，将你的屋面置于风险之中。

In high-wind environments, the roof is often the first building component to fail. Once the roof system is compromised, the structure has little chance of surviving sustained high winds or cyclonic conditions.

Selecting the right roofing fastening solution is critical to ensuring roof integrity and building survival under extreme wind loads.

在强风环境下，屋面往往是建筑系统中最先发生失效的部位。一旦屋面被掀翻，建筑在持续高风或台风条件下几乎难以幸存。

选择正确、可靠的屋面紧固方案，是确保屋面在极端风荷载下保持完整、抵御台风破坏的关键。

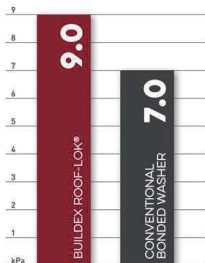


Australian Cyclone-Prone Regions
 澳大利亚气旋高风险区域



Conventional Fixing System (Reference Case)
 非抗风紧固系统 (参考案例)

LOW-HIGH-LOW TEST RESULTS



Select the Appropriate Wind-Restraint Plate and Sealing System for Cyclonic Conditions

选择合适的台风抗风板与垫片系统

Achieving reliable roof performance under cyclonic wind conditions depends on selecting the appropriate wind-restraint plate and sealing system. For crest-fixing applications, the use of Buildex Roof-Lok® wind-restraint plates is recommended. Compared with conventional bonded or composite washer systems, Roof-Lok® can significantly enhance the roof system's resistance to wind uplift and improve cladding retention performance.

With a larger effective contact area, Roof-Lok® is capable of resisting higher wind suction (negative pressure) and effectively reducing local stress concentrations between the sealing components and the roof sheet. This helps ensure that the roof cladding remains securely restrained under strong wind actions, thereby improving the overall reliability of the roofing system in cyclonic conditions.

In addition, Roof-Lok® incorporates a dual EPDM sealing arrangement. The upper and lower EPDM seals are precisely located within dedicated grooves, helping to prevent

water ingress at the interface between the fastener head, wind-restraint plate, and roof sheet, profile further enhancing the weatherproofing performance of the roofing system.

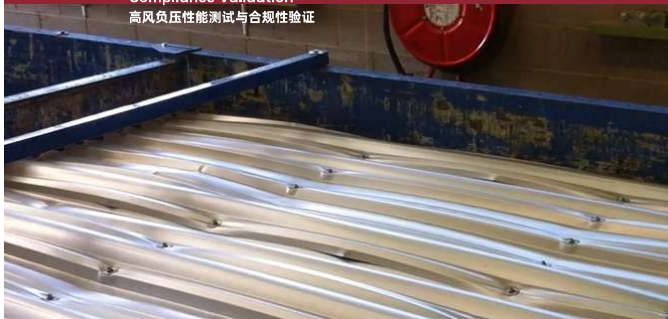
在台风工况下获得可靠的屋面性能，关键在于选择合适的抗风垫片系统。在波峰固定 (crest fixing) 应用中，推荐采用 Buildex® Roof-Lok® 抗风垫片。相较于传统复合垫片系统，Roof-Lok® 可显著提升屋面的抗拔能力与持重性能。

凭借更大的有效接触面积，Roof-Lok® 能够承受更高的风吸负压，并有效降低垫片与屋面板之间的局部应力集中，从而增强屋面板在强风作用下被牢固压持的能力，提高屋面系统在台风条件下的整体可靠性。

此外，Roof-Lok 采用双 EPDM 垫片密封结构，上下两道密封胶通过凹槽精确定位固定，可有效防止螺钉头、抗风板与屋面板型之间的渗水风险，进一步提升屋面系统的防水性能。

High Wind Suction Performance Testing and Compliance Validation

高风负压性能测试与合规性验证



In Australia, many profiled roofing manufacturers incorporate Buldex® wind restraint plates, such as Roof-Lok®, into their roofing systems and conduct high wind suction performance testing at James Cook University (JCU) under cyclonic conditions using the Lo-Hi-Lo cyclic loading method. This testing approach is widely adopted to evaluate roof system resistance to wind uplift and cladding retention performance under cyclonic wind events, and serves as an important performance reference for roofing systems designed for severe wind conditions.

In addition, Roof-Lok® has received Deemed to Comply approval (reference m/192) from the Northern Territory Building Advisory Committee, confirming that, when used within its applicable scope, it satisfies local regulatory requirements for roof system wind performance.

Based on the above testing validation and compliance recognition, building owners and installers can have confidence in the performance of Roof-Lok®. The product has been systematically verified under high wind suction

conditions, demonstrates excellent cladding restraint capability and is suitable for roofing systems designed for Category 5 cyclonic wind conditions.

在澳大利亚，众多屋面压型板制造商在其屋面系统中采用 Buldex® 抗台风垫片（如 Roof-Lok®），并在詹姆斯库克大学 James Cook University (JCU) 依据热带气旋工况，采用 Lo-Hi-Lo 循环加载方式开展高风负压性能测试。该测试方法已被广泛用于评估屋面系统在气旋条件下的抗风与持覆性能，并作为相关屋面板在台风工况下的重要性能参考基准。

此外，Roof-Lok® 已获得北领地建筑顾问委员会 Northern Territory Building Advisory Committee 颁发的“视为符合”Deemed to Comply 认可（编号 m/192），表明其在适用条件下符合当地法规对屋面系统抗风性能的要求。

基于上述测试验证与合规认可，业主及安装方可对 Roof-Lok® 的性能具备充分信心。该产品已通过高风负压工况下的系统性验证，具备优异的屋面压型能力，并适用于按五级热带气旋 Category 5 Cyclones 设计的屋面系统。

2024 Sep. Super Typhoon Yagi hits China's Hainan



YES, using Buildex

The Hainan Jiaoyuan project adopted the Buildex Roof-Lok® cyclonic washer fastening system. During a severe typhoon event, the fastening system remained largely unaffected and showed no signs of loosening or failure.

The only minor damage observed originated from the roof sheet material itself. Under extreme wind pressure, local tearing of the roof sheet occurred (as indicated by the red arrow), which subsequently led to the overall overturning of the fermentation shed structure under sustained high wind action. Post-event site assessment confirmed that the damage was not caused by failure of the fastening system. Throughout the typhoon, the Roof-Lok® fastening system maintained its structural integrity and effective clamping performance.

海南嘉源项目采用了Buildex Roof-Lok®抗台风垫片紧固系统, 在强台风中整体基本未受损。唯一的轻微损失来自屋面胶衣本体: 在极端风压下板材发生撕裂(见红箭头所示), 进而导致发酵棚结构在持续高风作用下发生整体掀翻。经现场评估, 损伤并非由紧固系统失效引起, Roof-Lok®紧固系统在整个台风过程中始终保持结构完整与有效压持功能。

NOT using Buildex



4

Product Testing and Certification

产品测试及认证

REAL WORLD TESTING (RWT)

真实环境测试



Real-world environmental testing is an outdoor exposure experiment conducted under natural conditions to assess the corrosion resistance of screw coatings in actual environments. Unlike laboratory simulations with controlled cyclic conditions, only real-world environments can fully evaluate the true performance of construction screws as they simultaneously endure the four primary environmental corrosion factors: acid rain, salt spray, humidity, and UV exposure. Buildex® is the world's first brand of self-drilling and self-tapping screws for construction to implement real-world environmental testing.

真实自然环境测试是在自然条件下进行的室外放置实验，旨在检验螺钉涂层层在实际环境中的抗腐蚀性能力。与实验室内单一模拟循环条件不同，只有在真实自然环境中才能全面评估建筑用螺钉同时承受酸雨、盐雾、潮湿和紫外线这四大主要环境腐蚀性因素的真实表现。Buildex®是全球首个实施真实自然环境测试的建筑用自钻自攻螺钉品牌。

Buildex pioneered Real World Testing in 1994 and with 25 years of experience we are confident that this is the only reliable way to determine corrosion performance. The company constantly tests compatibility of anti-corrosive coating and washer with roof sheet. We have run and continue to run multiple test sites using CSIRO for calibration of site corrosion rates.

· King Island (Current) · Newcastle (Current) · China (Current)
· Port Fairy · Townsville

Buildex®于1994年率先采用螺钉行业真实环境测试，经过25年的实践经验，我们坚信这是评估腐蚀性能的唯一可靠途径。公司持续对防腐涂层镀层和垫圈与屋面板之间的兼容性进行测试。我们已建立并持续运营多个测试站点，并利用CSIRO对现场腐蚀性速率进行校准。

当前地点：

· 国王岛 · 纽卡斯尔 · 中国海南 · 港费里 · 汤斯维尔



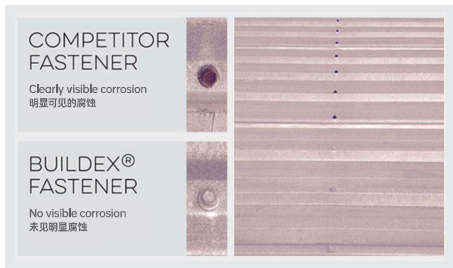


A Real-World Case Study

真实环境案例分析

Due to unusual circumstances, a roof was completed with a combination of Buildex® and competitor fasteners. On later inspection it was found that the competitor's fasteners had clearly corroded while the Buildex® fasteners showed no visible signs of corrosion in the same conditions.

在特定项目条件下, 该屋面施工采用了 Buildex®紧固件 与其他供应商紧固件的组合方案。后续检查发现, 在相同环境与使用条件下, 非 Buildex® 紧固件已出现明显腐蚀现象, 而 Buildex® 紧固件未见观察到任何可见腐蚀迹象。该对比结果基于实际应用环境, 为不同紧固件方案在真实工况下的耐腐蚀性能差异提供了直观参考。



Laboratory & Accreditation 实验室与认可

NATA Accreditation — Reinforcing Buildex®'s Trusted Quality NATA权威认可，Buildex®品质保障

The world's first laboratory accreditation organization, the National Association of Testing Authorities (NATA), was established in Australia in 1947. Testing reports and certificates issued by NATA-accredited laboratories have absolute authority in Australia. Almost all secondary and routine calibration work is completed by NATA-accredited laboratories.

NATA (National Association of Testing Authorities), established in 1947 in Australia, is the world's first laboratory accreditation body and represents the highest testing authority in the country.

Many Buildex® product performance tests—especially in corrosion resistance and mechanical properties—are conducted through NATA-accredited laboratories, whose reports and certifications carry full legal authority in Australia and are trusted in high-spec commercial and government projects.

As a fastening brand proudly rooted in Australia, Buildex® is committed to science-backed reliability and internationally recognized quality.

NATA (澳大利亚国家检测机构协会) 是全球第一个实验室认可组织，成立于1947年，代表着澳洲检测领域的最高标准与权威。

Buildex®产品的多项测试均由 NATA 认可实验室完成，涵盖包括耐腐蚀性能、机械性能在内的关键环节。这些实验室出具的检测报告与证书在澳大利亚具备绝对法律效力，广泛应用于政府工程、商业建筑和规范行业。

作为发源于澳洲的专业紧固件品牌，Buildex®始终坚持以科学为基础，用数据说话，确保每一颗螺钉都经得起全球市场的检验。







Cyclone Testing Station - Facilities
飓风测试中心——测试设施

Independently Tested at James Cook University — Buildex® Proven by Australia's Trusted Lab Buildex® 产品经詹姆斯·库克大学实 验室验证

Key Buildex® product performance tests are conducted at James Cook University Laboratory, affiliated with one of Australia's leading research universities. Recognized as the most trusted testing partner by Australian building material manufacturers, this lab is renowned for its authority in structural, wind-load, and durability testing.

By working with such a respected institution, Buildex® reinforces its commitment to scientific validation and long-term performance, further cementing its leadership in high-spec construction markets.

Buildex®多项关键性能测试在詹姆斯·库克大学实验室承担。该实验室隶属于澳大利亚最顶尖的研究型大学之一，长期被誉作为澳洲本土建筑材料制造商最信赖的检测机构，在结构性能、风荷载与耐候性测试方面具有权威地位。

通过与该实验室合作，Buildex®坚持用科学数据支撑产品性能，用真实测试验证长期耐久与应用可靠性，进一步巩固其在高标准建筑市场中的领先地位。



ilac-MRA CNAS Accreditation — A Trusted Guarantee of Buildex® Corrosion Resistance Performance

ilac-MRA CNAS 认可——Buildex® 耐腐蚀性能的可信保障



Buildex® is committed to providing high-performance fastening solutions suitable for demanding environmental conditions. All key performance characteristics are verified through test reports issued by independent third-party laboratories accredited by CNAS or operating under CNAS mutual recognition arrangements, ensuring that the performance data is objective, traceable, and supported by internationally recognised accreditation frameworks.

The China National Accreditation Service for Conformity Assessment (CNAS) is China's national authority responsible for the accreditation of laboratories and inspection bodies. Test reports issued by CNAS-accredited laboratories, through international multilateral mutual recognition arrangements, are widely accepted and relied upon by government regulatory authorities, project owners, and third-party engineering consultants worldwide.

Buildex®始终致力于提供经得起时间和最严苛环境考验的高性能紧固件。我们依托经CNAS认可或与其互认的第三方实验室出具的测试报告，确保每一项性能指标都具备公信力、权威性和全球认可度。

中国合格评定国家认可委员会 (CNAS) 是中国对实验室和检测机构进行认可的国家权威机构。由CNAS认可实验室出具的报告，被广泛视为国际“通行证”，并获得全球各国政府机构、项目业主以及第三方顾问的信任与采信。

FM Certified — Buildex® Defines Safety and Reliability in the Fastener Industry FM权威认证, Buildex®诠释 螺钉行业的安全与可靠

ITW Buildex® products have received FM APPROVAL certification, covering FM 4471, FM 4451, and FM 4881 standards. This means that our screws meet the world-leading safety standards for fire performance and high-temperature stability.

In addition to fire performance and high-temperature stability, these certifications also cover several key performance indicators, including structural stability, corrosion resistance, UV resistance, seismic performance, and thermal shock resistance. These rigorous certifications demonstrate that our screws not only perform excellently in fire and high-temperature environments but also provide long-term stable performance in various extreme conditions.

ITW Buildex® screws ensure the safety, durability, and reliability of building structures, providing comprehensive protection for buildings.

ITW Buildex®系列产品通过FM APPROVAL认证, 涵盖FM 4471、FM 4451和FM 4881标准。这意味着我们的螺钉在防火性能和高温稳定性方面, 符合全球领先的安全标准。除了防火性能和高温稳定性, 同时涉及多个关键性能指标, 包括结构稳定性、耐腐蚀性、抗紫外线、抗震性和热冲击等。这些严格的认证表明, 我们的螺钉不仅在火灾和高温环境中表现卓越, 还能在各种极端环境下提供长期稳定的性能。

ITW Buildex®螺钉在保证建筑结构的安全性、耐久性和可靠性方面的优越性, 为建筑物提供全面的保障。



CE Marking and Compliance with the EU Construction Products Regulation

CE 标志与欧盟建筑产品法规合规说明

Products subject to regulation that are placed on the market within the European Economic Area (EEA) are required to comply with applicable EU harmonized legislation and, where relevant, to bear the CE marking. The CE marking indicates that the manufacturer has issued a Declaration of Conformity (DoC) confirming that the product complies with the applicable EU harmonized legislation, and that the required conformity assessment procedures have been duly completed. EU harmonized legislation covers multiple product sectors; for construction products, the currently applicable legislation is the Construction Products Regulation (CPR), Regulation (EU) No 305/2011, which replaced the former Construction Products Directive 89/106/EEC.



Our carbon steel product range completed conformity assessment in accordance with the applicable legislation and harmonized standards in June 2023, and has been authorized to bear the C- marking (see attached certificates). Provided that the applicable legislation and harmonized standards remain unchanged, and that our company continues to comply with the required factory production control and surveillance obligations, the relevant certificates remain valid. Should there be any significant changes to legislation, harmonized standards, or product design, conformity assessment will be carried out in accordance with regulatory requirements, and the certificates and technical documentation will be updated accordingly.

在欧洲经济区 (EEA) 市场投放的相关受监管产品, 须符合适用的欧盟统一法规要求, 并在满足条件的情况下加贴 CE 标志。

CE 标志表明制造商已就产品符合适用的欧盟协调立法完成符合性声明 (Declaration of Conformity, DoC), 并按法规要求实施相应的符合性评估程序。相关立法涵盖多个产品领域, 在建筑产品领域, 现行适用法规为《建筑产品法规》(Construction Products Regulation, CPR_Regulation (EU) No 305/2011), 该法规取代了早期的 89/106/EEC 建筑产品指令。

我司碳足迹产品已于2023年6月按应用法规与碳足迹标准完成评估,并取得CE标志授权(详见随附证书)。在现行法规及碳足迹标准保持有效,且我司持续满足一致性控制与监管要求的前提下,相关证书持续有效。如后续法规、碳足迹标准或产品设计发生重大变化,我司将依据法规要求及时重新评估,并更新相应的证书与技术文章。

5

Installation and Common Issues

安装与常见问题

Installation Guide

钢结构自钻自攻螺钉安装说明

Power Tool Selection & Settings (for self-drilling self-tapping screws)

1.Power

Use tools rated ≥ 500 W.

2.Recommended speeds (by screw diameter or TPI)

- $\varnothing 2.9-4.8$ mm (typical #4-#10, e.g., #10-16 / #10-24) $\rightarrow \leq 2,500$ rpm
- $\varnothing 5.5-6.3$ mm (typical #12-1/4", e.g., #12-14 / 1/4-14) $\rightarrow \leq 1,800$ rpm
- $\varnothing 7.9$ mm (typical 5/16", e.g., 5/16-18) $\rightarrow 1,000-1,800$ rpm
- Drilling stainless steel (any diameter) $\rightarrow \leq 1,500$ rpm

3.Torque setting

The torque required to form/cut threads is usually higher than the torque to drill the hole. Set the driver's clutch to meet the thread-forming requirement.

4.Drilling depth

Use a depth stop to control penetration. Most self-drillers are intended to drill through all steel layers—confirm the total stack thickness before work.

5.Driver socket/bit

Use a socket/bit that matches the drive (hex, Phillips, Torx, etc.). Mismatched tools reduce installation quality and efficiency.

6.Avoid impact mode

Do not use hammer/Impact settings. High-frequency impacts damage the drill point—use a clutch-controlled screw gun instead.

电动工具选用与设定（用于自钻自攻螺钉）

1.功率：建议选用额定功率 ≥ 500 W的电动工具。

2.转速建议（按螺钉直径或TPI）

- $\varnothing 2.9-4.8$ mm (#4-#10, 如 #10-16) : ≤ 2500 r/min
- $\varnothing 5.5-6.3$ mm (#12, #14, 1/4", 如 #12-14, 1/4-14) : ≤ 1800 r/min
- $\varnothing 7.9$ mm (5/16", 具体牙型按产品规格确认) : $1000-1800$ r/min
- 钻入不锈钢基材时：建议采用低速高扭矩, ≤ 1500 r/min

3.扭矩设定：切削螺纹所需扭矩通常高于钻孔扭矩；电批离合应按攻牙阶段需求设定。

4.钻孔深度：使用限深装置控制钻入深度。多数自钻钉需钻透所有钢板层，开工前确认总叠厚。

5.套筒匹配：选用与螺钉驱动型式完全匹配的套筒（六角/十字/Torx等）；不匹配会影响安装质量与效率。

6.避免冲击模式：不建议使用带冲击功能的工具；高速频繁冲击会严重损伤钻尾。



Self-Drilling & Self-Tapping Screw Installation Steps

自钻自攻螺钉安装步骤

1. Preparation

- Ensure the surface is clean and free of debris, rust, or oil, which could affect the screw's performance.
- Select the appropriate screw length, considering the thickness of the materials being joined.

2. Tool Selection

- Use a power drill with the correct bit size that matches the screw head type (hex, Phillips, etc.).
- Set the drill to the appropriate speed; typically, a lower speed is ideal for controlling the drilling process in steel structures.

3. Drilling and Tapping

- Position the screw perpendicular to the surface to ensure correct threading and stability.
- Apply firm, even pressure while allowing the screw to penetrate and create its thread without excessive force, which could strip the screw or damage the material.

4. Spacing and Alignment

- Maintain even spacing between screws to distribute weight and stress across the structure evenly.
- Ensure screws are properly aligned, especially if they serve as the primary fasteners in load-bearing sections.

5. Securing the Screw

- Tighten the screw until it is flush with the surface, ensuring a firm hold without overtightening, which could damage the coating or strip the threads.

6. Inspection

- After installation, inspect all screws to verify they are securely fastened and properly aligned.
 - Regularly check for corrosion or loosening over time, especially in high-stress or corrosive environments.
- Following these steps can help maximize the screw's performance and extend the lifespan of the steel structure.

1. 准备工作

- 确保表面清洁无杂物、锈迹或油污，以免影响螺钉的性能。
- 根据要连接材料的厚度选择适当长度的螺钉。

2. 工具选择

- 使用匹配螺钉头型（六角头、十字头等）的电动工具钻头。
- 将电动工具设置为合适的速度，通常较低的速度更适合控制钢结构中的钻孔过程。

3. 钻孔与攻丝

- 将螺钉垂直对准表面，以确保正确的螺纹和稳定性。
- 施加均匀的压力，允许螺钉片钻和攻丝，避免过度用力以防止螺纹损坏或材料损伤。

4. 间距与对齐

- 保持螺钉之间均匀的间距，以均匀分配结构中的重量和压力。
- 确保螺钉对齐，尤其是在承重部分使用时。

5. 固定螺钉

- 将螺钉拧紧至与表面齐平，确保牢固固定，但避免过度拧紧以防损坏涂层或螺纹。

6. 检查

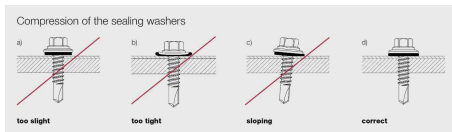
- 安装后检查所有螺钉是否紧固并正确对齐。
 - 尤其在高压或腐蚀性环境中，定期检查是否有腐蚀或松动现象。
- 遵循这些步骤有助于最大化螺钉的性能并延长钢结构的使用寿命。



The correct fastening method for screws and sealing washers 螺钉安装与密封垫圈的正确紧固方法

Fasteners with sealing washers should be tightened only until the washer is gripped firmly enough to provide a watertight seal. The fasteners should not be over-tightened because this may split the sealing washer or deform the sheet, either of which could lead to water penetration. Take particular care when valley fixing because there is no flexibility with the sheet hard against its support. Take particular care to ensure the fastener is driven perpendicular to the sheeting to avoid deformation of the washer.

带密封垫圈的紧固件应仅拧紧至垫圈被牢牢抓住足以提供防水密封为止。紧固件不应过度拧紧，因为这可能会导致密封垫圈破裂或板材变形，从而可能导致水渗透。在谷部固定时要特别小心，因为没有灵活性来适应板材与支撑物的接触。特别要注意确保紧固件垂直于屋面安装，以避免垫圈变形。



Common Installation Issues with
Self-Drilling, Self-Tapping Screws in
Steel Structures
钢结构自钻自攻螺钉常见使用安装问题

1. Difficulty Penetrating the Material

- Cause: This may be due to an inappropriate screw size or insufficient power from the power tool.
- Solution: Check the type and length of the screws to ensure they are suitable for the thickness of the material, use a power tool with adequate power.

2. Screw Slippage or Inability to Secure

- Cause: The surface may not be clean, or the screw was not installed vertically.
- Solution: Ensure the installation surface is clean and free of debris, and keep the screw vertical while tightening.

3. Screw Damage or Breakage

- Cause: Over-tightening or using an inappropriate screw type.
- Solution: Avoid excessive force, select the appropriate type and material of screws, and ensure they are used within the correct application range.

4. Corrosion Issues

- Cause: Screws without corrosion-resistant coatings or environmental factors.
- Solution: Choose screws with protective coatings and regularly inspect and maintain the installation area to prevent rust.

5. Screw Loosening

- Cause: Temperature changes or vibrations causing material deformation.
- Solution: Use locking devices, such as washers or locking nuts, to enhance the fastening effect.

1. 螺钉不易穿透材料

- 原因: 可能是由于螺钉规格不合适或使用的电动工具功率不足。
- 解决方法: 检查螺钉的类型和长度, 确保选择适合材料厚度的螺钉; 使用功率足够的电动工具。

2. 螺钉打滑或无法固定

- 原因: 表面未清洁干净, 或螺钉未垂直安装。
- 解决方法: 确保安装表面干净无杂物, 并在拧紧时保持螺钉垂直。

3. 螺钉损坏或断裂

- 原因: 过度拧紧或使用不当的螺钉类型。
- 解决方法: 避免过度施力, 选择合适类型和材质的螺钉, 确保在正确的应用范围内使用。

4. 腐蚀现象

- 原因: 未使用防腐涂层的螺钉, 或者环境因素造成。
- 解决方法: 选择具有防腐涂层的螺钉, 并定期检查和维护安装部位, 防止生锈。

5. 螺钉松动

- 原因: 温度变化或震动导致材料变形。
- 解决方法: 使用锁紧装置, 如垫圈或锁紧螺母, 来增强固定效果。

For more installation details, please contact ITW BUILDDEX or refer to the "Installation Manual"
更多安装事宜, 请联系ITW BUILDDEX 或 参考《安装手册》

6

Project Case

项目案例

Infrastructure Projects
公建项目

Selected airport, stadium & exhibition-venue clients / projects (partial list)

部分机场、体育场馆及展馆行业客户

- Beijing Daxing International Airport
- Changzhou Sunac Caoshan Convention & Exhibition Center Project
- Lhasa Airport Project
- Lianyungang Civil Airport Relocation Project – Terminal Building & Ancillary Works
- Port Louis Cruise Terminal Project, Mauritius
- Hazrat Shahjalal International Airport Project, Dhaka, Bangladesh
- Xi'an Convention & Exhibition Center Project
- Yibin Museum & Cultural Center Project
- Dong'an Lake Sports Park – Three Venues Project
- Guangzhou Dasha River Sports & Cultural Center Project
- Hainan Ocean Flower Island Project
- Anyang Sports & Cultural Center Project, Henan
- Universal Studios Project
- Qingyuan Olympic Sports Center Project
- Shanghai Disneyland Project
- Tangshan New Sports Center Project
- Yiyang Civic Cultural Center Project

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- 北京大兴机场
- 常州融创曹山会展中心项目
- 拉萨机场项目
- 连云港民用机场迁建工程航站楼及附属工程项目
- 毛里求斯路易港邮轮码头项目
- 孟加拉达卡沙贾拉勒国际机场项目
- 西安会展中心项目
- 宜宾博物馆&文化馆项目
- 东湖湖体育中心三馆项目
- 广州大沙河文体中心项目
- 海南海花岛项目
- 河南安阳文体中心项目
- 环球影城项目
- 清远奥体中心项目
- 上海迪士尼项目
- 唐山新体育中心项目
- 益阳市市民文化中心项目

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Selected power plant & converter/substation clients / projects (partial list)

部分电厂及换站行业客户

- CHN Energy (Guchua) Indonesia Java Power Plant Project
- State Grid Shaaxing Power Supply Bureau Project
- Haining Power Plant Project
- Red Bay Power Generation Co., Ltd. Project
- Hongshan Power Plant Project
- Huyi District Waste-to-Energy (MSW Incineration) Project
- Huaneng Qinbei Power Plant Phase III – Coal Yard Enclosure Renovation Project
- Huaneng Ruijin Phase II Expansion Project
- Huaneng Shidao Bay High-Temperature Gas-Cooled Reactor (HTGR) Nuclear Power Plant Project
- Huidong Taipingling Nuclear Power Plant Project
- Jiangsu Sheyang Port Power Plant Project
- Fengyuan Industrial Park Power Plant Phase II Project, Fengcheng, Yichun, Jiangxi
- China Southern Power Grid Converter Station Project
- Nanhai Changhai Power Generation Project
- Shanmau Group Hequ Energy Project
- ...



- 国家能源集团国华印尼爪哇电厂项目
- 国网绍兴电力局项目
- 海宁电厂项目
- 红海湾发电有限公司项目
- 鸿山电厂项目
- 鄂州区垃圾发电项目
- 华能沁北电厂三期煤场封闭改造项目
- 华能瑞金二期扩建工程项目
- 华能石岛湾高温气冷堆核电站项目
- 惠东太平岭核电站项目
- 江苏射阳港电厂项目
- 江西省宜春市丰城市丰源工业园电厂二期项目
- 南方电网换流站项目
- 南海长海发电项目
- 山煤集团河曲能源项目



Factory Projects or Industrial Building Projects 厂房项目

Industrial Plant Projects
Selected automotive & auto parts clients /
projects (partial list)
部分汽车及零配件行业客户

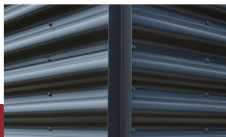


- Eaton Xi'an High-End Automotive Components Industrial Base Project
- Anhui Fuzhen Automotive Powertrain Systems Co., Ltd. Project
- Anhui Heli Co., Ltd. Project
- Anhui Zhongding Rubber & Plastics Products Co., Ltd. Project
- BYD Baotou Mining Truck Co., Ltd. Project
- Baoneng New Energy Guangzhou Panyu R&D & Manufacturing Base Project
- Baoneng New Energy Changshu Qoros Manufacturing Base Project
- Baoneng New Energy Kunming Manufacturing Base Project
- Baoneng New Energy Kunshan Manufacturing Base Project
- Baoneng New Energy Vehicle Xi'an Manufacturing Base Project
- Baoneng New Energy Shenzhen Automobile Manufacturing Base Project
- Beijing Kerongda Aviation Technology Co., Ltd. Project
- Pirelli (Yanzhou) Plant Project
- BYD (Hengyang) Rail Transit Intelligent Manufacturing Industrial Park Project
- BYD Xiangyang Industrial Park Project

- BYD New Energy Vehicle Shenzhen Headquarters Project
- Chengdu SVOLT Energy Power Battery Project
- Great Wall-BMW Joint Venture Plant Project
- Great Wall Motor (Pizhou) Core Components Project
- Great Wall Motor SVOLT Energy Changzhou Jintan Power Battery Plant Project
- Great Wall Motor SVOLT E-Drive Yangzhong Industrial Park Project
- Great Wall Motor Co., Ltd. - Xushui Branch Project
- Great Wall Motor Co., Ltd. - Chongqing Branch Project
- Great Wall Motor Vehicle & Components Shangrao Manufacturing Base Project
- Great Wall Motor Jingmen Vehicle Manufacturing Base Project
- Great Wall Motor Rizhao Vehicle Manufacturing Base & R&D Center Project
- Great Wall Motor Taizhou Manufacturing Base Project
- Great Wall Motor Vehicle & Components Yangzhou Manufacturing Base Project
- Great Wall Weiwei Automotive Co., Ltd. Project
- Changsha Volkswagen Joint Industrial Park Project
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- 埃顿西安高端汽车零部件产业基地项目
- 安徽孚桢汽车动力系统有限公司项目
- 安徽合力股份有限公司项目
- 安徽中鼎橡塑制品有限公司项目
- 包头市比亚迪矿用汽车有限公司项目
- 宝能新能源广州番禺研发生产基地项目
- 宝能新能源常熟观致制造基地项目
- 宝能新能源昆明生产基地项目
- 宝能新能源昆山生产基地项目
- 宝能新能源汽车西安生产基地项目
- 宝能新能源深圳汽车制造基地项目
- 北京科安达航空科技股份有限公司项目
- 倍耐力(兖州)工厂项目
- 比亚迪(衡阳)轨道交通智能制造产业园项目
- 比亚迪襄阳产业园项目

- 比亚迪新能源汽车深圳总部项目
- 成都蜂巢能源动力电池项目
- 长城宝马合资工厂项目
- 长城汽车(邳州)核心零部件项目
- 长城汽车蜂巢能源常州金坛动力电池工厂项目
- 长城汽车蜂巢能源创扬中产业园区项目
- 长城汽车股份有限公司徐水分公司项目
- 长城汽车股份有限公司重庆分公司项目
- 长城汽车及零部件上饶生产基地项目
- 长城汽车荆门整车生产基地项目
- 长城汽车日照整车及研发中心项目
- 长城汽车泰州生产基地项目
- 长城汽车整车及零部件扬州生产基地项目
- 长城威奥汽车有限公司项目
- 长沙大众联合工业园项目
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Selected chemical & pharmaceutical industry clients / projects (partial list) 部分化工&医药行业客户

- Aptar (China) Investment Co., Ltd. Project
- Axalta Shanghai Jiaoding Waterborne Paint Plant Project
- Anhui Sankeshu Coolings Co., Ltd. Project
- Anhui Shanying Paper Industry Co., Ltd. Project
- Amcor Intelligent New Materials Manufacturing Base Project
- Aosa Biotech Co., Ltd. Project
- Toflon Pharmaceutical Fluids & Bioprocess Systems R&D and Manufacturing Center Project
- BASF (Guangdong) Verbund Site / Integrated Base Project
- BASF Hefei (China) Metal Resources Co., Ltd. Project
- Changqing Huafeng Chemical Co., Ltd. Project
- Changqing Pukang Medical Device Manufacturing Project - Package 2 (Section 2)
- Chenzhou Kibing PV Photoelectric Glass Co., Ltd. Project
- Chutian Huazhong Pharmaceutical Equipment Co., Ltd. Project
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- 阿普塔(中国)投资有限公司项目
- 艾仕得上海嘉定水性漆工厂项目
- 安徽三棵树涂料有限公司项目
- 安徽山鹰纸业股份有限公司项目
- 安姆科智能新材料制造基地项目
- 奥思生物技术有限公司项目
- 奥星制药流体及生物工艺系统研发与制造中心项目
- 巴斯夫(广东)一体化基地项目
- 巴斯夫(中国)金属资源有限公司项目
- 肇庆华隆化工有限公司项目
- 肇庆普康医疗器械生产项目2标段工程
- 郴州旗滨光伏光伏玻璃有限公司项目
- 楚天华通医药设备有限公司项目
- 大正(南通)生活用品第二工厂年产万吨卷红项目
- 大晟科技股份有限公司项目
- 方大集团股份有限公司项目
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Selected electronics & electrical (appliances) industry clients / projects (partial list)

部分电子电气（电器）行业客户

- SK hynix Semiconductor (Dalian) Co., Ltd. Project
- Anheng Power Technology Smart Manufacturing Park Project
- Anhui Laili Intelligent Technology Co., Ltd. Project
- Anhui Linyang PV Equipment-2.5GW PV Module Project
- Anhui Nanhai Glass New Energy Materials Technology Co., Ltd. Project
- Anhui Xinhai High-Conductivity New Materials Project
- Chongzhou Shichuang Energy Co., Ltd. Project
- Chongqing Integrated Circuit (Shaoxing) Co., Ltd. Project
- Everpro (Wuhan) Technology Co., Ltd. Project (Chongqing Sheng / Changxinsheng (Wuhan) Tech Co., Ltd.)
- A33 Chongqing Liangjiang Transformer Smart Manufacturing Base Project
- Chongqing Guoxiang Environmental Technology Co., Ltd. Project
- Chongqing Haier Water Heater Co., Ltd. Project
- Dongguan Yonghixing Electronic Technology Co., Ltd. Project
- Fanglei Group Co., Ltd. Project
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- 爱思开海力士半导体(大连)有限公司项目
- 安恒电力科技智造园项目
- 安徽雷利智能科技有限公司项目
- 安徽林洋光伏装备2.5GW光伏组件项目
- 安徽芜湖新能材料科技有限公司项目
- 安徽鑫海新材料项目
- 常州时创能源股份有限公司项目
- 长电集成电路(绍兴)有限公司项目
- 长芯盛(武汉)科技股份有限公司项目
- 重庆ABB两江变压器智能制造基地项目
- 重庆国祥环境科技有限公司项目
- 重庆海尔热水有限公司项目
- 东莞市永之兴电子科技有限公司项目
- 方大集团股份有限公司项目
- 佛光发鸟特科能源和高端装备制造基地项目
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因篇幅所限，手册中未列山全部项目案例。如想了解更多相关项目案例及解决方案，欢迎与我们联系。

Due to space limitations, this manual does not include all project case studies. For further project references and solution details, please feel free to contact us.

Selected Food & Beverage industry clients / projects (partial list)

部分食品饮料行业客户

- PepsiCo Foods (China) Co., Ltd. Project
- Budweiser Brewery Co., Ltd. Project
- Beijing Chu Dama Food Group Co., Ltd. Project
- Latitude 47 Green & Organic Food Industry Project
- Binzhou Agriculture Project
- Changqing Brewery Xichang Co., Ltd. Project
- Chubang Soy Sauce (Zhongshan) Project
- Chuzhou Qiaqia Food Co., Ltd. Project
- Daka International Food Co., Ltd. Project
- Dangpeng Beverage Central China Regional HQ & Changsha Manufacturing Base Project
- East District Water Purification Plant Project
- Dongshan Huazhen Food Project
- Guangdong Chubang Automated High-Bay Warehouse & Phase II Natural Oil Expansion Project
- Guangzhou Wangliaoji Pharmaceutical Co., Ltd. Project
- Walls (China) Co., Ltd., Taicang Branch Project
- Henan Xuehui Food Co., Ltd. Project
- Inner Mongolia Xing'an Yili Dairy Co., Ltd. Project
- Ningxia Xuechuan Quyuan Potato Industry Project
- Ningxia Yili Dairy Co., Ltd. Project
- Xangfu Spring (Shaanxi) Honghegu Beverage Co., Ltd. Project
- Xangfu Spring Hubei Danjiangkou Co., Ltd. Project
- Xangfu Spring Jilin Changbai Mountain Co., Ltd. Project
- Paida Pet Food Co., Ltd. Project
- Qiaopan Wine Hantang Winery Project
- Shandong Binzhou Wudi Sailer Industrial Park New Agriculture Project
- Shandong Jiaodian Food Manufacturing, R&D & Distribution Center Project
- Shandong Weizhiyuan Food Co., Ltd. Project
- Shaoxing Baling Dairy Co., Ltd. Project
- Shanghai Huangyu Pet Food New Raw Material Warehouse Project
- Shanghai Yurun Meat Food Co., Ltd. Project
- Shenyang Yili Dairy Products Co., Ltd. Project
- Sichuan Pepsi-Cola Beverage Co., Ltd. Project
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- 百事食品中国有限公司项目
- 百威啤酒有限公司项目
- 北京厨大妈食品集团有限公司项目
- 北纬四十七绿色有机食品产业项目
- 滨州农业项目
- 重庆啤酒西昌有限责任公司项目
- 厨邦酱油4山项目
- 滁州洽洽食品有限责任公司项目
- 大康国际食品有限公司项目
- 东鹏饮料华中区域总部及长沙生产基地项目
- 东区水质净化厂项目
- 东山华裕食品项目
- 广东厨邦智能立体仓及三期天然油扩产项目
- 广州王老吉药业股份有限公司项目
- 和路雪(中国)有限公司太仓分公司项目
- 河南省雪汇食品有限公司项目
- 内蒙古兴安伊利乳业有限公司康乐仁公司项目
- 宁夏银川固原马铃薯产业项目
- 宁夏伊利乳业有限公司分公司项目
- 农夫山泉(陕西)红河谷饮料有限公司项目
- 农夫山泉湖北丹江口有限公司项目
- 农夫山泉吉林长白山有限公司项目
- 派得宠物食品有限公司项目
- 桥研葡萄酒汉唐酒庄项目
- 山东威海无糖赛尔工业园新农业项目
- 山东康乐食品生产研发及分装中心项目
- 山东味之源食品有限公司项目
- 陕西博铃乳业有限公司项目
- 上海壹壹宠物食品新建原料大仓项目
- 上海雨润肉食品有限公司项目
- 沈阳伊利乳品有限责任公司项目
- 四川百事可乐饮料有限公司项目
-

Logistics, Industrial Real Estate & Warehousing

Industry Clients / Projects (partial list)

部分物流地产及仓储行业客户

- Alibaba - Chahar Project
- Alibaba - Zhangbei Cloud Project
- Cainiao Shanghai Lingang Smart Logistics Hub Project
- Cainiao Network Chengdu Qingbaijiang Park Project
- Cainiao Network Tianjin Airport Free Trade Zone (Konggang) Park Project
- Chaochu Tashun Materials Trading Co., Ltd. Project
- Dongguan Cainiao Logistics Park Project
- Dongguan Yangdeli Warehousing Co., Ltd. Project
- Mapletree (I) (a) Logistics Park Project
- Mapletree (Henduan) Modern Industrial Logistics Park Project
- Mapletree (Jiaxing) Integrated Industrial Park Project
- Mapletree (Kaifeng) Modern Logistics Park Project
- Mapletree (Luoyang) Logistics Industrial Park Project
- Mapletree (Nanning) Integrated Logistics Industrial Park Project
- Mapletree (Pinggu) Modern Logistics Park Project
- Mapletree (Tianjin) Airport Logistics Park Project
- Loczek Changshu Industrial Park Project
- Loczek Co., Ltd. Binhai Manufacturing Base Project
- Loczek International E-commerce Industrial Park Project
- Loczek Jiaxing International E-commerce Industrial Park Project
- Lingang Fengkian Park Industrial Center Project
- Lingang Life Blue Bay Science & Technology Park Project
- Lingang Intelligent Manufacturing Park Project
- Lingui Elevated Warehouse (High-Rack Warehouse) Project
- Ningbo Yuyao Vanke Property Services Co., Ltd. Project
- Ningde International Logistics Park Project
- GLP Jiading Vello Logistics Park Project
- GLP Jinjiang Logistics Park Project
- GLP Wuhan Dongxihu Zouma Lin Logistics Park Project
- GLP Yunnan Dianzhong Logistics Park Project
- Qingdao Jiaozhou Bay Bonded Logistics Center Project
- 阿里巴巴-蒙古项目
- 阿里巴巴-张北云项目
- 菜鸟上海临港智慧物流基地项目
- 菜鸟网络成都青白江园区项目
- 菜鸟网络天津空港保税区项目
- 奥翔泰贝物资贸易有限公司项目
- 东莞菜鸟物流园项目
- 东莞永得利仓储有限公司项目
- 三棵树(海盐)物流园项目
- 三棵树(汉川)现代工业物流园项目
- 三棵树(嘉兴)综合产业园项目
- 三棵树(开封)现代物流园项目
- 三棵树(连云港)物流产业园项目
- 三棵树(南宁)综合物流产业园项目
- 三棵树(平谷)现代物流园项目
- 三棵树(天津)空港物流园项目
- 乐歌常熟工业园项目
- 乐歌股份滨海制造基地项目
- 乐歌国际生物科技产业园项目
- 乐歌嘉兴国际电子商务产业园项目
- 临港奉贤园区产业中心项目
- 临港生命蓝湾科技园项目
- 临港佳世园项目
- 隆锐高架库项目
- 宁波余姚万科物业服务有限公司项目
- 宁德国际物流园项目
- 普洛斯嘉定维龙物流园项目
- 普洛斯晋江物流园项目
- 普洛斯武汉东西湖顺丰马岭物流园项目
- 普洛斯云南滇中物流园项目
- 青岛胶州湾保税物流中心项目
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Trusted by Leading Industries, Proven in Critical Projects

携手重点行业客户，共建可靠项目



ITW Patent Wall:

ITW patents span specialized equipment and technologies used in aerospace, deep-sea oil rigs, automotive, and construction product applications.

ITW 专利墙:

ITW的专利覆盖航空航天、深海石油钻井平台、汽车及建筑产品应用等多个领域的专用设备与技术。

For many years, Buildex® has provided professional fastening solutions to leading customers across a wide range of industries, supporting projects in sectors such as automotive manufacturing, chemicals, airport construction, food and beverage, energy, and infrastructure. While each industry has its own performance requirements, they all share the same high expectations for quality, safety, and reliability.

Behind every customer logo is a real project application and trust built over time. These logos reflect Buildex®'s proven ability to perform across diverse environments and also demonstrate our long-standing commitment to supporting customer growth through professional products, consistent quality, and long-term service. Buildex® connects more than buildings and systems—it also connects customer confidence in quality engineering.

多年来，Buildex®持续为众多重点行业客户提供专业连接解决方案，广泛参与汽车制造、化工、机场建设、食品饮料、能源配套及基础设施等多个领域的项目应用。不同行业，对产品性能有着不同的要求；而共同不变的是，客户对于品质、安全与可靠性的高标准期待。

每一个客户logo背后，都是一次真实的项目应用与信任积累。它们见证了Buildex®在多元场景中的落地能力，也体现了我们始终坚持以专业产品、稳定品质和长期服务支持客户发展的承诺。Buildex®不仅连接建筑与系统，更连接客户对高品质工程的信心。

 ASTELFLASH YOUR EMS PARTNER	 中联重科	 徐工集团		
 XPENG	 SIASUN 新松	 WANHUA		 Continental 大陆集团
 SEW EURODRIVE	 JML 今麦郎	 京东物流 JD Logistics		 厦门高特集团 XIAMEN GAO TE GROUP
 SANY	 三棵树	 PPG	 乔丹	 JMW NEWAY 纽威
 Danfoss 丹佛斯	 Midea	 农夫山泉	 CAI NIAO 菜鸟	 上海机电集团
 蒙牛	 YUTONG	 MAZDA	 CHERY	 吉利汽车
 SVOLT 蜂巢能源	 Haier	 普洛斯 GLP	 LEGO	 中国忠旺
 GEELY 吉利汽车控股有限公司 GEELY AUTOMOTIVE HOLDINGS LTD.	 FOXCONN	 Jinko Solar	 东方雨虹 HONGKONG, HONGKONG	 和合食品
 中国华能 CHINA HUANENG	 HITACHI	 CATL		 AUX 奥克斯
 TESLA	 国家电网公司 STATE GRID CHINA STATE GRID CORPORATION	 CAI NIAO	 中国华电	 扶能
 Galanz	 BDIA	 中国大唐集团公司 China Datang Corporation	 超威电池 CHILWEE	 SANY
 SKYWORTH 创维	 BYD	 APP sinarmas	 Coca-Cola	 PEPSICO
 ABB	 muyuan 牧原	 新希望六和 NEW HOPE LIUHE	 LUGONG 柳工	 GOWORLD
 伊利	 天能股份 TIANNENG CO., LTD.	 LONGI	 Sateri	 GREE 格力
 TSINGTAO 青岛啤酒	 H	 LAND ROVER	 maple tree logistics	 国联证券 GUOLIAN SECURITIES