



*Interviewed and edited by Gang Hao Chang,
Vice Editor-in-Chief of Fastener World*

Feature: Construction & DIY Fasteners Suppliers

With more countries loosening their border control policies, the industrial demand is expected to gradually recover and the demand for construction and DIY fasteners is also expected to increase. In such a big market with fierce competition, Taiwanese suppliers continue to demonstrate their innovation and develop many outstanding new products. The excellent functions, design, applications, and multifaceted service continue to create more competitive edges for their customers.

FOCUS THIS MONTH



PRO POWER



SHEH KAI



sheh fung
screws company

SHEH FUNG



VERTEX



FALCON





Challenges Lowest Price

~Pro Power has recently focused on the OEM production of drywall piercing screws and aims at offering the cheaper price, shorter lead time, and more superior quality to the market.~

Leading construction and DIY fasteners supplier, Pro Power Co., Ltd., is well known in the industry for its “cheap prices, quick delivery, and extremely high quality” and its strength of manufacturing many customers’ products which later have been ICC or ETA certified has been also greatly recognized in U.S. and European markets for years. Its major products include various wood screws with sizes below 10mm and lengths less than 150mm. Its current monthly capacity can be up to 4,000 tons. In order to broaden the supply range of its construction and DIY fasteners as well as correspond to diversified customer demand and reinforce its market share in U.S. market, **Pro Power has even recently announced its further deployment in the OEM production of “Drywall Piercing Screws” with a goal to offer customers an alternative approach to getting access to products at cheaper prices, with faster delivery, and of more remarkable quality.**

Lower Price, Quick Penetration

Drywall piercing screws featuring fine threads and standard sharp drilling points (also a kind of wood screws) are used to penetrate thick and hard sheet metal. As the technical entry barrier of manufacturing such type of products is higher than that of general drywall screws, the quoted prices suppliers can offer customers are usually a bit high. There are limited suppliers in the market, so customers can only choose from the suppliers offering comparatively lower prices. However, with the addition of Pro Power, customers can now purchase drywall piercing screws that are “cheap indeed.”

“Although our quoted price of drywall piercing screws is cheaper than those of other suppliers, this is not a price-

cutting competition, but greater utilization of our experience, technique, and capabilities to achieve better cost control and finally give the saved cost back to customers. Thus far, we’ve received quite a few inquiries from customers,” said Pro Power President Chris Chen.

Precision Automation, Better Cost Control

Pro Power’s sales last year were 50% up from the 2020 record, with roughly 95% of its products being sold to the U.S. As U.S. customers value prices a lot and are very strict with product quality, Pro Power introduced sets of sophisticated automated equipment from Italian SACMA and Korean Hyodong into manufacturing lines to prevent man-made factors from influencing the quality stability of its products. It has also integrated various management software into its manufacturing lines, which helps achieve the most suitable control based on different customers’ demand and tolerances and fulfil the management strategy of “reduced cost and less waste.” **The 3 new plants under construction (over 6,000 sqm) are expected to be officially put into operation this year after the building occupancy permits are received and can also become a powerful support to the capacity of its existing plant of nearly 6,000 sqm.**

President Chen added, “U.S. demand for construction and DIY fasteners is forecast to gradually recover by the end of this year. We hope our sales in the U.S. will grow further or even take 90% of U.S. DIY fastener market to make more customers experience the competitive edge brought by our price and quality.”

Pro Power contact: [President Chris Chen](#)

Email: chris@propowerfastener.com





Anti-corrosive & Durable Sheh Kai ETA Certified

Bi-metal Concrete Screw Anchors

Unique Welding Technology

- **Fastening Part** - A4 or A2 Austenitic Stainless Steel to Provide longlife application and reliable fastening unit.
- **Cutting Part** - Selective hardening to provide the better cut into the undercut of concrete.

Corrosion-incurred screw anchor failure or poor fastening results due to insufficient drilling point hardness have been sometimes heard, and the potential risk of unexpected fall of not-securely fastened objects may also lead to property loss or severe casualties. In such an era when regulations and users worldwide become more concerned about fastening security, how to develop products featuring both security and durability has undoubtedly become the priority consideration in the R&D of new-generation screw anchors. Sheh Kai Precision Co., Ltd. knows what challenge users may face in fastening applications, as a result, with years of leading bimetal welding and heat treatment technology, it has developed several amazing products for users. Drill bits with tungsten carbide tips and ETA Option 1 certified bimetal screw anchors approved by German DIBt are its most recent representative products.

Made of Stainless and Carbon Steel Excellent Corrosion Resistance & Quick Fastening

Sheh Kai bimetal screw anchors are made of 300 series austenitic steel (body) and carbon steel (tip) and processed with precision welding and heat treatment to ensure high corrosion resistance of the stainless steel body and more effective fastening than other general screw anchors. However, manufacturing such products requires the welding strength to exceed the installation torque, otherwise, they are prone to breakage at the welding point, resulting in a more complicated situation. In addition, carbon steel tips must be also processed with localized hardening treatment, which will require sufficient experience and strong R&D capabilities and shows quite high technical entry barriers. Technically, the entry barrier is very high.



Fastening Part
Austenitic Stainless Steel

Cutting Part
Inductive Heating Tapper

“300 series austenitic steel features exceptional anti-corrosion. While used outdoors, they reveal greatly increased service life and avoid security issues related to corrosion-incurred screw anchor failure, especially in highly corrosive environments. Tips made of harden-able carbon steel are used as lead threads during fastening to avoid unsuccessful fastening of stainless steel bodies due to material properties,” says Sheh Kai Manager Barry Tsai.

Available head types and sizes Sheh Kai currently offers are: hex washer head (M6 x 75 ~ 150 / M8 x 90 ~ 150 / M10 x 105 ~ 150 / M12 x 125 ~ 150 / M6 x 75 ~ 150 / M8 x 90 ~ 150 / M10 x 105 ~ 150 / M12 x 125 ~ 150), pan head (M6 x 75 ~ 150 / M8 x 90 ~ 150 / M10 x 105 ~ 150) and countersunk head (M6 x 80 ~ 150 / M8 x 95 ~ 150 / M10 x 110 ~ 150). Besides ETA, the application for U.S. ICC-ES is already underway.

High Security to Become Future Market Concern

Strict regulations of screw anchors for construction have been adopted in many markets. Australia, for example, adopts strict restrictions against the entry of non-certified products. Sheh Kai with OEM ability and int'l approval can help clients develop markets and supply latest regulations-compliant products. In Taiwan, its screw anchors have been also installed on fire protection pipes in many high-rise buildings and Ubike facilities.

Tsai added, “Screw anchors share only a minimal part of the total construction cost, and the security, convenience, and durability resulted from the correct use of products are more significant than future maintenance & repair cost. That air-con outdoor units fell down onto somebodies has been common, we've all heard stories of outdoor installation failures, such as air-con units, that caused horrible injuries, if installers can use specialty stainless steel products, such things can be avoided. Contractors can also require project builders to use parts that are suited for projects to avoid future disputes. For more info please link to <https://www.facebook.com/shehkai/>





Releases New Patented Screws for 2022

Taiwanese leading construction & engineering screws manufacturer Sheh Fung Screws once again demonstrated its amazing R&D ability and has recently released the “Composite Deck Screw Twin Cut- Patented” and “Cement Board Screws Pineapple Knurl – Patented.” Users having experienced such new products all marveled at their creativity and performance a lot.

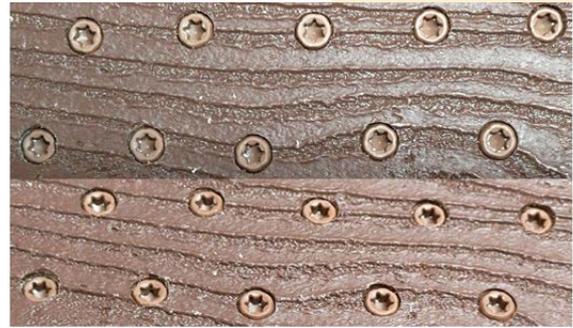
Great Dust Removal Performance Without Mushroom Defect

◆ Composite Deck Screw Twin Cut- Patented

In outdoor balconies or floors around swimming pools, different colors of water-proof, high-temperature & compression resistant composite decks made of recycled wood dust and plastics are oftentimes used. However, the surface of such decks is prone to mushroom defect when they are fastened together with the base layer of ACQ lumbers, which is very likely to get feet of passers-by injured. Sheh Fung’s R&D team noticed such a risk, made deep research on the performance of products, and adopted 6-lobes design to achieve better cam-out avoidance. Special oval threads can cut the composite deck boards during fastening and the twin-cut design can quickly cut off and remove wood dust, similar to pre-drilled hole that can countersink screws into the composite deck boards. On the other hand, in order to maximize the efficacy of products, it can also have products made of different materials based on where they’ll be applied (for example, it’ll use C1022 for basic balcony decks and then have them painted to the same color of the boards or use SS305 in swimming pools, seashores or other highly corrosion-prone environments and get their heads painted to the same color of the boards, making the fastened screws completely invisible.”

Sheh Fung’s R&D and Manufacturing Assistant Manager Roger Su said, “This Taiwan-patented product is also painted with ACQ-resistant Kaitex® coating and has been ICC certified, which offers customers stability and durability. The current available sizes are mainly #10x2-3/4”. “

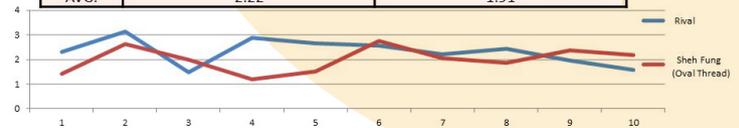
Oval threads cut flush into composite deck boards



Speed test of penetration into composite deck boards

Penetration of Finished Products											
Material composite deck boards										Load/15kg	1800rpm
Test Value	Rival					Sheh Fung (Oval Thread)					
		2.31	1.97	1.59	2.72	2.20	1.4	1.89	2.75	2.78	2.20
	3.12	1.98	1.53	2.00	1.86	2.61	1.77	1.27	2.39	2.76	
	1.49	1.88	2.08	1.61	2.87	1.97	1.96	1.27	2.59	2.32	
	2.88	2.04	1.96	2.48	3.14	1.19	2.01	1.26	1.41	1.52	
	2.66	1.62	2.99	2.41	1.94	1.51	1.17	1.77	2.71	2.38	
Unit: Sec.	2.56	2.54	2.96	2.53	1.60	2.75	1.27	1.87	2.72	1.45	
	2.22	2.69	2.11	2.93	3.07	2.06	1.46	1.18	1.18	1.49	
	2.42	1.60	2.65	2.06	2.41	1.86	2.10	1.67	1.88	2.05	
	1.94	3.05	2.03	2.48	1.78	2.37	1.48	1.48	1.70	1.70	
	1.57	1.87	2.06	1.78	2.67	2.17	2.37	2.23	1.56	2.45	
MIN.	1.49					1.17					
MAX.	3.12					2.78					
AVG.	2.22					1.91					

The less elapsed time, the better penetration



◆ Cement Board Screws Pineapple knurl – Patented

In the application environment of cement boards, using general screws may lead to poor engagement or unpleasing protruded cement boards owing to poor dust removal. Sheh Fung’s patented cement board screws with pineapple knurls made of 1022 carbon steel and coated with highly corrosion-resistant E-coating or Kaitex can assemble cement boards with wood or steel structures vertically and special pineapple knurls can cut cement boards into powder to achieve a complete countersunk fastening result. After cement boards are painted, those fastened screws can be also invisible. Assistant Manager Su added, “This product has been patented in Taiwan and the U.S. and is mainly applied to cement boards. Common sizes #9x1-1/4”, #9x1-5/8” and #9x2-1/4” are now available.”

According to Sheh Fung, “Pleasing, durability, and safety have been always the focal points in our product development. We hope that these popular new products can offer users better operating experience and fastening results. In addition, our another high-performance R1 drilling screw for fastening two steel plates also features high-speed and stable drilling design compliant with test standards of various countries. It has been not only patented in Taiwan, but also will apply for more patents in other countries in the near future.”

Sheh Fung contact: [Rita Su \(Sales Assistant Manager\)](mailto:rita_su@shehfung.com)

Email: rita_su@shehfung.com





V-TEX Thread for Wood by VERTEX PRECISION

Vertex Precision (VP), which specializes in automotive, electronics, and mechanical fastener manufacturing, has recently taken another leap forward to a new industry sector. The recently released and patented “V-TEX Thread for Wood” (V-TEX) is VP’s official entry announcement into the household & DIY markets. Considering the growing demand for household & DIY fasteners due to the global pandemic in addition to the high interest of European and American market users in wood screws with more astonishing functions and performance, VP reacted by expanding our service range to meet diverse customer demands. Through detailed testing, research, and evaluation by VP’s Research & Development Team, VP successfully developed the “V-TEX”, which features a more optimized appearance and better performance than other counterparts in the market.

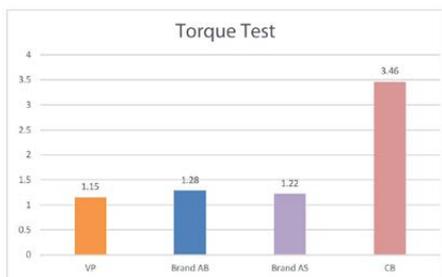
Distinctive Structure Featuring Excellent Functions

“V-TEX” wood screws offer three kinds of minor diameters, which (sorted by value from large to small) are cutting ribs, shank, and chip recesses. After its sharp-point drill drills into the material, the cutting ribs will twist off fibers to create a larger hole diameter and the special cutting teeth on threads will cut off wood fibers. Then, the chip recesses offer extra space for dust to reduce drilling resistance, facilitating the assembly/engagement/fastening of wood materials and revealing excellent functionality. “V-TEX” is a type of screw for hard wood featuring both cutting and quick drilling and fastening.

3 Major Features of “V-TEX”

Low Driving Torque

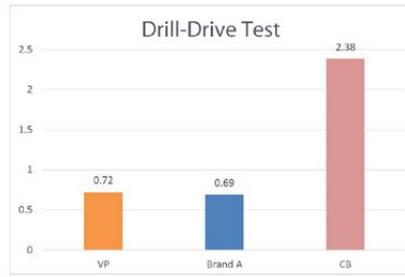
In a test using European hard wood, “V-TEX” features the driving torque lower than the other 3 brands, giving users more labor-saving fastening experience.



N-m

Low Drilling Time

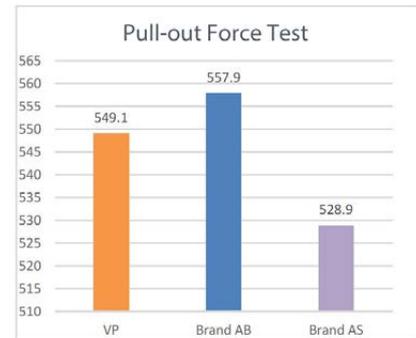
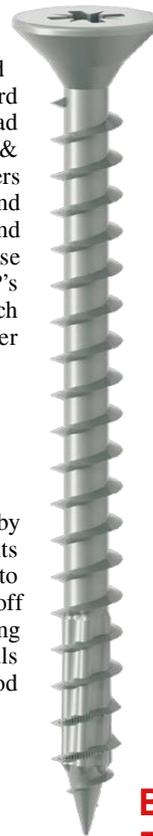
Fastening can be completed within 0.72 second, which is almost on par with other European leading brands in the same test. This will save a lot of drilling time and enhance work efficiency for users.



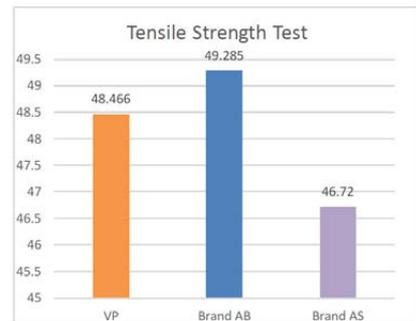
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Strong Pull-Out Value

Be it the pull-out force test or the tensile strength test, V-TEX wood screws have proven to function to the same levels as those of products made by other European leading manufacturers. After fastening is completed, it won’t become loose easily. It is not only easy to use, but can also be applied to maximize the work efficiency.



kgf



kgf/mm²

Better Product Application Experience

With Europe and the U.S. being its major markets, VP values every customer’s demand greatly. In order to provide customers with better quality and service, VP not only continues to improve its manufacturing capabilities, but also carries out more complete production assessment for certain products to lower the defective rate in manufacturing. Years ago, VP established a new plant in order to manufacture automotive screws due to a customer demand. VP hopes to make the most of the experience in co-developing products with customers to realize the modularization of automotive fasteners. At the present stage, when the demand for construction and furniture fasteners continues to be substantial, VP will also extend its product portfolio and focus on global marketing.

According to VP, “We hope to give users new product experience and help them complete their home improvements in a more labor and time saving manner. At the same time, we’ll also keep strengthening our research & development on V-TEX and enhancing functions based on customer’s feedback. We hope to offer better prices and service to support customers with a win-win situation.”

VP contact: [Sales Dept.](mailto:sales@vertexprecision.com.tw) Email: sales@vertexprecision.com.tw





Falcon Fastener-

The Strongest Support to Diverse Customers' Demands



changes, all made it treated by buyers from advanced markets with increased reliance and continuous order placements. A leading German distributor with which it has been collaborating for years even contacted Falcon last year to supply urgent order which was delayed by other suppliers, fully showing the fact that Falcon's strength of solving problems quickly has been deeply recognized by overseas customers.

“The Covid pandemic caused significant influences on our lives, ways of consumption. Falcon keeps high sensitivity to observe industrial supply-demand, sea freight costs, exchange rates and our own capital utilization. We frequently discussed with customers and hope to reduce the impact to the lowest. For example, since Falcon was aware of the raw

Specialized in customized and non-standard screws as well as the supply of standard items like tri-lobular screws, self-tapping screws, self-drilling screws, machine screws, SEMS screws, roofing screws, collated screws, concrete screws, micro screws, security screws, and bimetal screws, Falcon Fastener, with 14 years of company history, has not only been good at offering specialized and diverse products, but also has a wide knowledge of relevant standards and regulations of Europe, America, Japan, and many other advanced markets. Falcon's business not limited in its own factory. Due to its familiarity with the operation of Taiwanese industrial chain, it has established close collaboration with many domestic excellent associate factories since very early times. Through flexible deployment and collaboration between its self-owned factory and associate factories, Falcon Fastener is fully capable of satisfying various customers' demands for products and can also greatly expand the product range it can offer.

“Such flexibility allows us to present the strengths of Taiwan fastener industry perfectly to customers.” said Falcon General Manager Eric Chiu.

High Sensitivity to Help Buyers Adapt to Market Changes

Falcon Fastener has continuously made progress and breakthrough in operation since its inception in 2008. Even though the pandemic last year continued to pose challenges, it still reported a growth of up to 60%. Falcon's strict quality control mechanism, competitive prices, and what's more important, the ability to flexibly and quickly react to market

material shortage problems, we informed customers to review safety stock and place annual order as earlier as they could. Therefore, both of us pass through the challenge when the lead time extends from 2-3 months to 6-9 months. For another case, in the hard time of vessel capacity, it's difficult to find shipping space even if the consignee was willing to pay sky-high ocean freight. Falcon actively looked for container space for customer choice. We don't have to do that in FOB terms, but we always try to do everything we can do to make our customer happy.” Chiu added.

According to relevant data, the growth margin of Taiwan's fastener export in 2021 reached around 35% and the demand of the global fastener market continues to exceed its supply. It is expected that such a high growth margin could be continuously maintained this year. As one of the models of quality service in the fastener market, Chiu added, “Falcon's well-trained team will keep our deployment and hope that in the post-pandemic era and after considering the balance between the supply and the demand we can utilize the increased capacity and operating capital to the most proper level and always put customers' demands in our priority list.”



Falcon contact: **Eric Chiu, General Manager**

Email: falcon.senda@msa.hinet.net

