



Feature:

Small Fasteners & Related Machines

by Fastener World editors

Early this year, the EU determined to follow the ruling of WTO and repealed the anti-dumping measure on certain carbon steel fasteners originating in China and transshipped from Malaysia. This may translate to a change in the strategic positions of 4 major fastener market players (i.e., the U.S., Taiwan, EU, and China) in the world's fastener export. In addition, uncertainties such as the EU's economic problems over the past two years as well as the UK's referendum for staying in the EU or not are likely to influence the EU in fastener trading and its relationship with the world. With regard to the aforementioned repeal of anti-dumping measure, Taiwan estimates that it may cause impact mainly on small screws and automotive bolts. So, in the feature report on "Small Fasteners & Related Machines" this time, we interviewed specialized companies from all walks of the fastener industry, including **Acton** (stainless steel fastener expert), **Darloc** (specialty miniature fastener expert), **Ferodom** (bolting joint expert), **Milanoviti** (special screw expert), **Mitsuboshi C.I.** (wing bolt/nut expert), **Chiyoda-byoura** (automotive small screw expert), **Leda** (washer & elastic fastener expert), **Shixi** (fastener machinery expert). These companies share their exclusive approaches to topping the market and they provide good examples for readers to make breakthroughs or create new businesses.

by Konnor Lee, Fastener World

Belief in Sustainable Business & Customer-First Principle ►LEDA METAL Co.

Established in 1999 in Tangxia Town of Dongguan City in Guangdong Province, Leda is a professional factory producing retaining rings, circlips, washers, flexible fasteners, assembled screws and multi-functional screws. The company introduced decades of die manufacturing experience and R&D capability from Taiwan and combined advanced management experience of the fastener industries from China, Taiwan, and Hong Kong. It possesses specialized production equipment, a complete management system, and a strict inspection system. Its product line complies with international and industrial standards such as JIS, ANSI, DIN, and ISO. Despite the adverse market trend, it grew last year with the revenue of nearly 150 million RMB.



Vice President Lwo

Preemptive to Earn Consolidated Presence in Fastener Manufacturing Base in Dongguan

In the 90's, we witnessed China's active reform, massive influx of foreign investment on factory establishment, and increasing demand for the manufacturing sector. Guangdong Province, adjacent to Hong Kong, possesses geological advantages. Many Hong Kong and Taiwanese companies expanded their market range and tapped into Guangdong in order to save costs. At one time Guangdong became a critical manufacturing base for China. Mr. Lin Zhi Ming, founder of Leda, discovered that professional washer and assembled screw makers in China were scarce despite numerous standard screw makers and that their product quality was far from satisfaction. With his 30-year experience and insight on the fastener industry, he sensed infinite opportunities from the business. In 1999, he found the right business partner, and both of them chose to establish Leda in Dongguan City, introduced advanced technology from Taiwan and Japan, and combined corporate cultures of China, Hong Kong, and Taiwan, gradually forming the Leda culture as "Customer First & Sustainable Business".

Entry into the International Market

Leda's product functions like fastening, anti-loosening and adhering are applicable to all industrial products. Wide applications range from cars, electric motors, electric appliances, electronics, IT, medical equipment to OEM. Its main customers are located in Pearl River Delta, Yangtze River Delta, Southeast Asia, the United States and Europe.

As China enters the era of cars, the rapid development of the automotive industry drives the increasing demand in the automotive market. Leda has nearly 10 years of abundant experience in manufacturing automotive fasteners. Since 2015, it has been dedicated to the market development in the automotive industry and made good results. In the past it mostly traded with foreign companies in the Pearl River Delta region, and therefore its sales were 70% for the domestic and 30% for the overseas. In the future it plans to make direct export via an e-commerce platform to speed up its overseas sales (increasing the sales to be 50% for the domestic and 50% for the overseas). In this way it can make both offence or defense and seek sustainable development while it has large customer bases in domestic and overseas markets



Keep Improving to Take the Lead

In response to the increasing requirement for quality in the global manufacturing sector as well as the increasing demand for more sophisticated products, Leda has been dedicated to quality control and function requirement. Its customer service bases on this motif: "Compliance to scientific management; Excellent quality production; Persistent improvement; Exceeding client's requirement". Besides professional production, it has advanced engineering design and R&D capability to offer clients professional advice and technical support during product development.

To better complete its manufacturing ability and facility, Mr. Lin plans to set up a new plant in Dongguan City within the next few years. By then he will add more fastener machines and punch equipment, as well as CNC machines to provide more effective and complete services for clients.

ACTON ► French Leading Stainless Steel Fastener Supplier Beyond Customers' Expectation

The France-headquartered Acton founded in 1985 is specialized in the business of stainless steel fasteners and is a company with more than 30 years of experience in the stainless steel fasteners market. It deals with commercial enterprises in France, Europe, and the rest of the world.

Acton has become one part of the well-known French Group Emile Maurin (a leader in industrial supplies) since 1997. Acton offers one of the European largest ranges of stainless steel fasteners including screws, nuts, washers, threaded rods, circlips, pins, rivets, and marine accessories. Customers of Acton can be always satisfied by its short lead times and customer satisfaction has become Acton's corporate culture.

"Today our range includes more than 14,000 references which are all available in large quantities. Thanks to several extensions of the warehouse, a strong organization of the staff, the company can manage resources and offer a large range of products. Also, the logistic processes and the purchasing policy permit us to manage effectively and in the best possible manner our stock," said Director Philippe Purgy.

Since May 2013, clients can buy, find data sheets and consult the stock situation through Acton's website. "We all know that the Internet is today much more than a new network. It is the real network via which a large part of the business across the world is now taking place," added Director Purgy.

Acton focuses on offering total service value including high quality and high-tech products. Its main customers are hardware dealers, industrial suppliers and companies trading with wood/timber, mainly interested in stainless steel products such as metric machine screws, nuts, washers, self-tapping screws and wood screws.

The quality has always been a crucial factor for Acton's products and the skill and the knowledge of the company permit to create and design its own products. Manufacturers Acton is cooperating with are mainly based in Asia. Since 2006, Acton has been ISO 9001 certified, demonstrating its commitment to satisfying customers' needs with products compliant with the highest quality standards.



Acton's plan in 2016 is to build a new extension of its warehouse and improve some services of the company. Director Purgy emphasized, "Acton's plans are to pursue its growth in France and develop export sales to become a major European player in the market. We want to keep on increasing our market shares in the French market even if we are considered as a leader." With such an ambitious and zealous attitude, it is believed that Acton will definitely reach another milestone in the very near future.

Miniature Locknut & Insert Specialist

► DarLoc Corporation by Dean Tseng, Fastener World

DarLoc Corporation is a superior stocking supplier of the highest quality, specialty niche product line of Miniature and Clinch Self-Locking Nylon Insert and All-Metal Locknuts, supplying at competitive "commodity-like" prices within customers' delivery requirements, and stocking many patterns available in steel, stainless, brass, aluminum materials, and other special materials upon request. It offers zinc, zinc yellow, cadmium, cadmium yellow, cadmium olive drab, cadmium with molybdenum film lube, wax, and other platings. Chemical, Physical, Plating Certifications and Metric sizes are also available.

Most of DarLoc's miniature and clinch self-locking nuts are machined from bar, offering tighter precision tolerances when locked onto the mating part. The Nylon insert locking element in the nuts is pressed closed, versus staked, offering a 360 degree metal-to-insert contact, assuring more consistent and predictable torque results. It supplies to North America, Europe, the Middle East, and even Asia.

The Miniature Niche Market

How is it that DarLoc would choose to specialize in miniature products? Mr. Glen Brin, sales manager, says "Ordinary size locknuts and patterns are available from mostly all stocking importers and distribu-

tors. Miniature and Clinch Self-Locking Nylon Insert and All-Metal locknuts are listed in many competitors catalog and websites, but are rarely available from stock or within a reasonable lead-time. We fill a void in the marketplace, as we stock most sizes and specials are available within a 4-6 week lead-time.”

With global opportunities, many products are being imported complete, already assembled, thus decreasing the once larger market. However, there are still many OEM’s and distributors requiring engineering help to their locking nut requirements. “In some instances, we have been able to have “machined” reduced hex locknuts cold formed, without compromising quality. This has allowed us to offer lower cost locknuts, enabling end-users to utilize in their applications that once were economically unfeasible. This has opened up new market opportunities. Most of our business is mainly from North America,” noted Glen.

Added Values— Not Just Miniature Nuts

Many times end-users and/or their distributors are looking for help to solve locking requirements. DarLoc is able to offer a miniature, clinch, or standard locknut that will spin on freely and eventually lock. If a clinch requirement is necessary, it has suggested tools for installation and methods to help ease installation. Many times customers will experience seizing or galling. DarLoc helps solve these challenges by offering adjusted torque or lubricants to both the nut and mating bolt, within the application.

10 Years & Looking Beyond

The company’s plan for the future is to horizontally diversify product line, by supplying automatic screw machined parts to print, that would be manufactured from the same screw machines, already producing its precision self-locking nuts. DarLoc is celebrating 10 years this June. Its 37 years of locknut experience will help customers to achieve the best results.



by Gang Hao Chang, Fastener World

► MILANOVITI s.r.l. the Company with High Flexibility in Satisfying Customers’ Needs

The Italy-based Milanoviti srl was established by Antonio Bossari in 1986. With over 20 years of experience in the carbon steel, stainless steel, and aluminium fastener market, Milanoviti has been recognized by the industry as an important and historic company in the fastener sector.

Milanoviti has its production focused on special screws (especially self-tapping screws, screws for plastics, thread forming screws, metric screws, screws with assembled washers) and the capability to produce in low and high-strength steel, stainless steel, brass and aluminium. The other important part of its business is the sale of nuts, washers and other fastening systems.

“We can not only offer quick delivery but also small quantities of special screws production lot. We are involved to meet the requirement of small and large retailers, interested in production of special screws for home appliance and automotive industries. We are also interested to offer products directly to end users of home appliances, electronic/electrical and automotive industries,” said Marco Bossari, president of Milanoviti.

Milanoviti is characterized by the flexibility of its plants, allowing it to properly respond to customer needs. The possibility of being able to provide together with screws, nuts and washers also enables it to serve companies looking for partners in managing their fastener needs. Milanoviti currently has two main customer types: retailers and end consumers.



Milanoviti is supporting customers to reach advanced logistics systems such as Kanban and consignment stock. The Kanban (an element of Just-in-Time system for inventories management) avoids high warehouse stock costs. The use of Kanban enables both the supplier and the customer to properly organize their production cycles. The Consignment Stock is a stock management technique by the supplier, which lets customers to achieve significant benefits such as lower management and financial costs, because the stocks are not owned until they have been picked up out of the dedicated warehouse. It also allows to have a supply lead-time cancelled because the goods are always available and ready for their use.

Milanoviti has been certified to ISO 9001 since 2000. Considering the increasing importance of the automotive industry in the company's sales, Milanoviti is also looking for achieving the goal of total quality management (TQM). In 2016 Milanoviti has a consistent development plan in expanding its machine park as well as the continuous improvement of plant and existing machines. The export turnover in 2015 represented 35% of Milanoviti's total revenue; however, Milanoviti also aims to increase the proportion to 50% in the next 2 years.

Milanoviti is undoubtedly the right partner for special production, comprehensive solution of fasteners needs, and customer based services.



by Gang Hao Chang, Fastener World

► FERODOM Ltd. Specialist Offering “Just the Best” Bolted Joint Solutions



FERODOM Ltd. established in 2000 is a family-owned enterprise. Under the leadership of the founder with vast experience and technology in mechanical fastening of steel and other materials by means of threaded or threadless fastening elements, the company has become one of the leading roles in offering related industries the best fastening solutions.

The smooth access to domestic/international producers and distributors for mechanical joints elements allows Ferodom to offer customers optimal solutions. Ferodom also has an experienced team able to offer customers technical knowhow for design of products, including bolted fasteners.

“We are ready to help our customers in their choice of rational methods of assembly together with quality fastener materials. These two offerings of design and quality materials constitute the pillars of our company's business strategy,” said President Jozef Dominik.

Several types of locking systems for preventing spontaneous loosening were developed by Ferodom. For example, its locking nut IstLock (IL) is not only widely used in the Slovak market, but also in many other countries. “IstLock® (IL) is possible to be used for various nuts made of steel, stainless steel or other materials and is based on the application of divided locking rings made of plastic POM forced to reduce their diameter during assembly and by that they push on the screw thread. The IL has one unique advantage – almost infinite life-time period because the locking ring can be easily changed and replaced by the new one, while the nut itself remains preserved. This nut is usually used in areas where vibration and heavy external dynamic stress are affecting,” said Dominik.

Ferodom's policy is to provide customers with “just the best” solutions, which indicates interactive cooperation, especially in design documentation. Ferodom has built up a large clientele comprising suppliers and customers. Some workshops, which are also significant marketing strategies, are also given by Ferodom. Such practical seminars are highly specialized and focused on the current problems of customers.

The strongest industrial sector of Ferodom is mechanical engineering and related fields. On the other hand, as Slovakia is currently the biggest car producer per capita in the world and leading brands like VW, Peugeot and KIA show great demand for standard and customized fasteners, Ferodom can use these advantages to expand its sales. Ferodom's customers are mainly boilers and various thermal and refrigerating isolation, gas and oil flange pipes, railway transport, car repairing technology and many other industries.

In addition, Ferodom has an online platform consisting of data about particular fasteners, basic sizes, characteristics and related standards (DIN/ISO/STN/EN). The basic function of this platform is to serve clients/visitors and help them place orders correctly.

Being certified to ISO 9001 is a proof that Ferodom performs very successful quality management. “Our quality control is done by reliable choice of equally certified suppliers and input check. The basic, routine measuring operations are taken internally, and more demanding measurements such as mechanical characteristics and metallography are realized in cooperation with theoretical departments and universities,” said Dominik.

Mr. Dominik concluded that “Fastening with help of the thread and thread-free fasteners is a beautiful scientific discipline of a multidisciplinary character, as many aspects like mechanical engineering, metals, mechanics of fracture, chemistry, automation, measuring and many others should be also considered. Screws hold our civilization and we can hardly imagine the industrial sector without using fasteners. As a result, Ferodom will continue to follow the trends in the field of mechanical joining and develop business relationships with the progressive producers, distributors and design offices. The IstLock is not the only result of Ferodom's development activities, and some other interesting designs will be also prepared to be realized in the near future soon.”

by Dean Tseng, Fastener World

The World's Top Maker of Wing Bolt/Nut

► Mitsubishi C.I. Co., Ltd. from Japan



Established in 1938, Mitsubishi is a world-topping comprehensive maker of “Hand-fastening Screw”, particularly focused on wing nuts and wing bolts. It is good at cold heading and press forming with a daily capacity of hundreds of thousands of pieces. Its original product, EAGLESTAR Knob Bolt, even earned recognition from the design industry, acquiring the Japanese Good Design Award in 2008. Mitsubishi applies a sense of roundness to product design, and so as its stainless steel products, bringing customers a soft corporate image.

Top-notch & Diversified Wing Nut/Bolt

Mitsubishi's wing nut/bolt lineup amazes the market with multiple models of separate functions, including corrosion/rust proof type; wing nut + bolt composite type; low price + light weight + high torque type; visually beautified + smooth touch type; low-head type; Italian GAMMA-made model. Its products take 70% of the domestic market share and are applied to many things like TV antenna, electric tool, machinery, car, and vending machine.



Given that, I am curious to know the feature of Mitsubishi products. President Mr. Juzo Nakamura explains, “Our self-developed projection forming technology, titled ‘cassette die technology’, reduces the manufacturing cost down to 20%, and therefore we can produce dies at a reasonable price offering. Additionally, we can customize and produce composites made of various metal components. Moreover, resin-formed products like our knob nuts can be manufactured in small lots. We strive to differentiate from other makers in terms of difficult short lead time, high-end complicated design, and small-lot production.”

Carbon-fiber-reinforced Polymer Products (CFRP)

Mitsubishi not only customizes and produces resin products in various original shapes, but also develops CFRP products. It particularly designs and plans for the aforementioned composite products, conducting per-order production of light-weight/high-strength/rust-proof CFRP products as well as thermosetting and thermoplastic products.

Ongoing Advancement

Mitsubishi has a representative office in the U.S. The president says, “We used to do screw export and that is why we have a base in the U.S. Due to the influence of appreciated Japanese yen, now the U.S. office is a standalone business unit, and we have focused production on the domestic Japan. In the future we will base on domestic production and conduct small lot production of various types of products. Particularly we will enhance the development of metal-plastic composites and CFRP products.” Besides original R&D, Mitsubishi applies aesthetics to products like EAGLESTAR series. After gaining the title of world's top “Hand-fastening Screw” maker, Mitsubishi will undoubtedly continue to be supported and trusted by various industries.

Zero Defect Rate Automotive Small Screw Expert

► Chiyoda-byoura Co., Ltd. from Japan

by Dean Tseng, Fastener World

Established in 1975, the biggest strength of Chiyoda company is its specialty in manufacturing high quality small screws for fuel system components on car engines. Its products are supplied domestically and are also adopted by global automotive assembly plants. The company does not produce standard products, whereas it specializes in special products made to the specifications on customers' drawings.

Chiyoda company is extremely stringent on product defect rate. In every one million pieces of produced fastener products, not even a single defective product is allowed. That is almost close to zero defect rate. President Mr. Mikio Nomura says in the interview, “Defective components will directly lead to car fire and traffic accidents. Therefore, the company combines forces from top to bottom to do everything it takes to eradicate the chance of defective components.”

Business Partner from Taiwan

The quality of Taiwanese fasteners is favored by Chiyoda company. The president says, “As we focus our products on automotive fasteners, we set very high requirements for quality. Currently we center our source of purchase on Taiwan.”

In the president's perspective, or in other words, in the perspective of Japanese fastener industry, how advanced is the technical level of Taiwanese fasteners? He explains, “Taiwanese

fasteners are comparatively cheaper than the Japanese ones and have reached a certain recognized level of quality. Now we directly import brass nuts from Chin Lih Hsing Precision Enterprise Co., Ltd. (CLH) located in New Taipei City of Taiwan. Prior to the import, we actually had thought of buying China-made fasteners, but eventually we did not purchase because at that time we were quite worried about the quality. Since we have been purchasing products from CLH for the past 6 to 7 years, we have become a good business partner with CLH. More so that I visited CLH's booth at Taiwan International Fastener Show on April 11th."

Automotive Market Prospect & Future Business Plan

Chiyoda company is particularly investing a lot in developing fasteners for next-generation car engines. What does the president make of this market? "Except for developing countries, I think by 2050 car engine capacity will not be much. Instead, the electric vehicles and fuel cell vehicles will become mainstream and therefore the demand for their battery and motor components will increase."

In terms of the Japanese car market, the president does not think car capacity will increase much in the future. "On such condition, we need to work hard to gain orders of fasteners used for commodities other than cars. Although the company currently exports products through traders, I am considering to set up my own sales base."

Taiwan has many world-class automotive fastener makers. Perhaps in the near future we will see more and more of them cooperating with Chiyoda company. We also expect Chiyoda company to gain more overseas business opportunity in the future and bring Japanese high quality fasteners to the world.



At the Frontline of Innovation

by Konnor Lee, Fastener World

► Shixi Enterprise (International) Organization

As the first-class fastener manufacturer in China, Shixi not only offers various lines of products including electronic screws, chipboard screws, drywall screws, and expansion bolts in various specifications, but also is a professional fabricator of cold forging, heading, thread rolling and washer assembly machines. Shixi-branded fastener machines take the lead in the industry. In 2003, the company developed the "Clamp-free 2-Die 3-Blow Parts Cold Forging Machine" and was honored by CMCA with the "premium award for excellent new products", and in 2009 its patented "Clamp-free Multi-Functional Parts Forming Machine" received an award for patented invention from Dongguan City Government. It owns more than 3,000 square meters of plant area, over 100 employees, as well as domestic/foreign patented technology, and more than 300 kinds of technical achievements and honors, with brilliant performance of RMB100 million annual revenue in the fastener industry.

Innovation as Top Priority ; Well-acclaimed for Balanced Quality & Price

At the inception in the 1980s, Shixi was a little known processing factory with only 10 employees. A saying goes well that every dog has its day. Before you know it, Shixi has become a business entity combining scientific R&D, innovation, production, trading, and investment. Its products are sold to Southeast Asia, South Asia, South America, North Europe, the Middle East, and Africa. This year it focuses on the Indian and Middle East markets. The key to its breakthroughs and industry-leading position lies in its unwavering belief in "introducing new things, continuous improvement, and non-stop research and innovation".

Fasteners account for 40% of Shixi's production. In the 1980s, Chairman Mr. Dongzuo Yang noticed the upcoming boom of the domestic economy and realized that fasteners as a fundamental industrial supply would definitely make a big business, and therefore, he started to step into the fastener industry. According to him, "Innovation is the source of corporate development and a symbol of prosperity for the people of a nation. Only with innovation can a company stand out in the fierce competition. Only with innovation can the people of a nation develop stably." In our perspective, it is not just the corporate brand that Shixi is establishing. Its ultimate goal is to change the impression on China's manufacturing and earn recognition from the whole world!

