

Fastener Machinery, Molds and Dies

compiled by Fastener World

We all know the importance of screws: Various things in our daily life need to be fastened by screws and bolts. The functions of the entire machines, constructions or equipment may be affected if one single tiny screw is missing. The significance of screws can't be overemphasized, and of course, the machines that manufacture fasteners are also vital.

The relationship between fasteners and fastener machines is like a "chicken and egg situation". Fasteners make up machines; and the machines continue to manufacture or examine fasteners. Without the production and inspection of these machines, molds and dies, different kinds of screws cannot be produced. The type of fasteners vary, so do fastener machines, molds and dies. The production line of fastener industry will collapse if machines are damaged or broken. The importance of fastener machines shouldn't be ignored.



Best Cold Forging Former Manufacturer & Business Partner

Biing Feng Enterprise Co., Ltd.

by Michelle Hsieh, Fastener World

Biing Feng seeks to achieve continuous improvement of the company! Its abbreviated name, BF, can stand for "Best Former" or "Best Friend," which implies that Biing Feng is the best cold forging former manufacturer and the better business partner that grows with clients. Biing Feng has been established since 1976, which has got a foothold in the market of nut and part cold forging formers in terms of quality, technology or experience.

Biing Feng's machines are categorized into 3 types: Standard, Long Stroke and P.K.O. Among them, the most popular ones are 14B to 33B formers (applicable to M8-M22) under the P.K.O. series. In response to the trend of automated manufacturing, clients are making fastener products with more and more complicated designs and gradually elevated requirement on precision. Compared to other general formers, the P.K.O series have an additional punch kick-out function to further satisfy clients' needs. Biing Feng's cold forging formers are applicable to the industrial sectors from furniture, construction, automobiles/motorbikes to aerospace. Its equipment has been sold to 32 countries worldwide, and in recent years mainly sold to markets like Europe, East Asia, Southeast Asia and America. According to Biing Feng's conservative estimation, the global machine sales of Biing Feng as of the 1st half of 2016 have been over 5,200 sets.

In 2014, Biing Feng finished the construction of its second plant and expanded the production line. Last year the construction of another new plant was also started and is expected to be completed this year. The new plant will not only provide employees with a more comfortable working environment and usable space, but will be also able to handle the increase in orders. The administrative unit is also planning to build a new office building. In the era with increasing concerns about environmental protection, Biing Feng has had solar panel power systems installed on the roof of its whole plant to make its own contribution to environmental protection.

Reasonable Prices and High Quality as Other European/US/ Japanese Counterparts

Compared to other similar domestic and overseas companies, the most recognized feature of Biing Feng is its machine stability, durability, maintenance, and good operability for users, resulting in a high machine availability/uptime for users. With reasonable prices, good after-sales service, client-oriented approaches, and persistence to its mission statement, Biing Feng always treats clients as its most important friends.

Industry 4.0 and Intelligent Manufacturing have boosted changes in clients' needs. Facing the changes in demand, Biing Feng's equipment can be customized according to customers' needs and go with additional functions, such as servo-controlled feeding





systems, die micro-inch movement calibration systems, inverter installment, forging inspection systems, and rapid die-switching systems. In recent years, Biing Feng has rolled out 8-dies equipment, providing clients with more advanced manufacturing capabilities. Its primary goals for the future are continuous R&D and innovation, mutual growth with clients against challenges, and client satisfaction.

Continuous Progress with Times

In the industry with fierce competition, it is essential for a company to progress with times, in order to continuously be on the forefront of the industry and in order not to be eliminated. With regard to distribution routes, Biing Feng has redesigned its website and opened its own FACEBOOK page this year. It not only promotes itself on fastener and machinery magazines, but also actively exhibits or visits shows to increase its exposure, visit clients and increase opportunities to meet customers face to face. Regarding after-sales service, it tries its best to predict what problems clients may face and what they may need, and offer machine operation manuals at the time of shipment to help clients know how to operate the machine immediately upon receipt. Additionally, when clients submit their feedbacks, it will offer them professional advises based on its years of technique and experience in specialized cold forging former production and will do whatever it can to listen to clients, satisfy them and grow with them, as Biing Feng always offers the "Best Former" and is their "Best Friend!"

Biing Feng contact: Mr. Lance Wei email: bf@bestformer.com



A New Star in the Fastener Industry- TIMI **Tele-centric Image Measurement Instrument**

Universal Standard Vision Technology Corporation (USDV)

Modern Technology in the Traditional Industry

Universal Standard Vision Technology Corporation (USDV) established in March 2016 is a specialized industrial visual measuring instrument manufacturer and system provider. Its team members are mostly from the Electronics & Optoelectronics Research Laboratories of ITRI. In the past few years it was dedicated to the R&D of vision technology for automatic optical inspection instruments (AOI) and successfully developed the precision optical measuring system for aerospace fasteners and the automatic sorting system for automotive nuts. Then, because of some reasons, USDV was established for developing new measurement systems for the markets of automotive parts and fasteners.

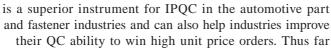
Both automotive part and fastener industries used contact-type measuring instruments for first check and the following input process quality control. They used to adopt random sampling inspection in manufacturing lines and used sorting machines for final inspection. However, with the stricter requirement for quality control from customers, the traditional way is obviously not enough to satisfy customers' needs and should be left in the past.

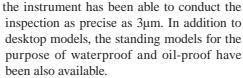
The Accurate First-check and IPQC Instruments Without Missing **Any Defective Part**

Sorting machines cannot be used for precision dimensional measurement and it is especially impossible to use them in high-speed rotation for the micron-level dimensional measurement. As a result, only first check and in-process sampling inspection can be adopted. The former is not quick enough and is very laborintensive. The latter (IPQC) is subject to the repeatability of measurement instruments and the reproducibility of operators, when you see the process going beyond the limit, many defective products have been produced, so it is still difficult to maintain good quality control. Accordingly, why don't we implement strict quality control from the

very beginning of first-check and IPQC in order to achieve real-time modifications during the process?

In response to industrial demand, USDV has developed the first TIMI Tele-centric Image Measurement Instrument. This measurement instrument with the ability of quick, automatic and precision optical inspection





Full Automation in Production and Inspection

In terms of industrial automation, everyone may think of manufacturing automation first rather than inspection



automation. Quality is of course dependent upon the process, but inspection is also an important part that cannot be ignored. IPQC must be able to provide instant and favorable manufacturing parameters in order to form a cycle of intelligent manufacturing.

Service Localization

"Service localization" has been always the mission statement of USDV and its promise to the domestic industry. In order to realize this goal and understand what the industry needs and offer the quickest after sales service, USDV set up its Tainan branch this year. USDV also offers an exclusive "TIMI Measurement Experience & Training Class" in Tainan, which is open to companies with prior registration. USDV will provide the most professional measurement training and consultation and help customers solve problems they are facing and offer them the best pre-sale service.

USDV received many positive customers' feedbacks when it attended Kaohsiung Industrial Automation Exhibition and demonstrated TIMI with many specific measurement functions this April. After watching the patented measurement technology for triangle screws, many top level managers of Taiwanese fastener industry appreciated its contribution and expertise in industrial applications. . Former TIFI Chairman Joe Chen is also confident that USDV will solve the bottleneck of management for the industry. Some foreign companies have also expressed their interest in TIMI.



Thus far, some companies have introduced USDV inspection technology into their production lines. USDV TIMI measurement instrument not only has the ability of automatic precision measurement, but also is installed with a manufacturing statistic process management module, so we can expect that TIMI will definitely bring perfect solutions to fastener manufacturing and hi-tech gene to the traditional industry.

TIMI Tele-centric Image Measurement Instrument

- Wider measurement range with micron-level measurement precision.
- Script and complete full dimension measurement automatically.
- One machine has multiple functions of geometric measurement, which can simultaneously satisfy the demand for axial rod measurement.
- Instantly monitor dimensions in manufacturing process and analyze statistics to provide complete QC solutions.
- A lying image measurement instrument equipped with a rotating axle for realizing the following functions of intelligent measurement.
- i. Detecting the max. and min. size around the circumference
- Rotating parts to do geometric measurement.
- iii. Detecting the location of the 1st thread of a screw and measuring the thread length.
- iv. Automatically measuring the size of a triangle screw without having to be aligned with the axis.

USDV contact: Mr. Ming Hui Lin email: mhlin@usdvision.com)

Supplying Various Tapping Machines with Guaranteed High Quality

Jar Hon Machinery Co., Ltd.

by Michelle Hsieh, Fastener World

Jar Hon Machinery Co., Ltd. established in 1986 is a specialized designer and manufacturer of various special purpose machine of manufacturing industries in Taiwan. In order to offer better and quicker service as well as handle the increasing production needs, Jar Hon expanded its business scale in Feb 2014 and set up a new factory in Renhua Industrial Park in addition to the factory located in Taichung Taiping Industrial Park. Jar Hon tries to satisfy customers' demands at all times and continues to develop various types of automation equipment, many of which have been patented with honor. Jar Hon





Jar Hon is able to offer customers various secondary processing machines, tapping machines, or customized machines according to customers' specific needs. Jar Hon can manufacture machines for any industry (e.g. fasteners, electronics or 3C) having the demand for thread tapping. In addition to being applied to fasteners, its machines can be also applied to automotive & motorbike parts, wheel nuts & special nuts, anchors and secondary processing.

Jar Hon's Machines Adhere to "Keeping Quality" and "Doing Better"

Current sales of Jar Hon are 30% from the domestic market and 70% from foreign countries. In its foreign sales, part of them are completed via direct sales, however, Jar Hon also partners with other leading forming machine suppliers and domestic traders to sell its machines to the markets (especially to China, India and Southeast Asian countries). Jar Hon's automatic feeding and tapping machines demonstrate high accuracy performance and many of these machines can be simultaneously operated by only one man, which saves the labor force a lot for companies. These machines are installed with safety mechanisms for feeding, torque and clamping to ensure the service life of taps and safety. If detected any defective semi-finished part or abnormal parts during tapping, the entire process will stop immediately, so the number of non-standard compliant fasteners can be controlled within the lowest level.

Machines manufactured by Jar Hon are absolutely standard-compliant, so there are less needs of repair. Moreover, as Jar Hon has an extremely high requirement for machine accuracy, Jar Hon manufactures all machines by itself in order to control the accuracy. Valuing products of Jar Hon, Manager Jimmy Kao said, "They are, without doubt, quite durable, good for applications and show extremely high quality." In terms of pre-sales service, Jar Hon actively discusses with customers in as many details as possible and tries its best to fully satisfy what customers need. As for the after-sales service, Jar Hon cares about almost every detail as well. For example, many other companies may not help customers repair

their machines, as they hope customers can replace their old machines with new ones. However, Jar Hon will not do so but offer the most comprehensive repair solutions.

Misfortune is Sometimes a Blessing in Disguise

For the fastener industry, the new law enforcement regarding more limited working hours in Taiwan has caused the shipment delay from their partnered companies and cost increase. Many fastener companies have also reported difficulty in labor arrangement in manufacturing lines and the greatly increasing labor cost out of their control. Jar Hon, though influenced in some parts, has been also benefited by this governmental policy in some other parts. Owing to the increasing labor cost, many fastener companies have turned to Jar Hon to buy their automation equipment in order to reduce their labor cost. In this era with increasing demand for automation, it is definitely good news to manufacturers of automation equipment.

In addition to exhibiting at many international machinery fairs around the world, Jar Hon will also exhibit at Taiwan International Fastener Show in April 2018. In the future, Jar Hon hopes to offer customers high quality machines with more purposes that can truly save customers' time and labor. Dedicated to offering the highest quality and continuous improvement, Jar Hon will also continue to develop various tapping machines for a wide range of customers.

Jar Hon contact: Mr. Jimmy Kao email: jarhon@ms34.hinet.net



Unitapping Co., Ltd.

The Expert in Automatic Tapping

by Michelle Hsieh, Fastener World

Unitapping Co., Ltd established in 1983 is specialized in automatic tapping solution and providing various machines to meet different customers' needs. Unitapping was originally a manufacturer of nuts (particularly jam nuts). In order to reach the quality requirement for tapping jam nuts and speed up the production, Unitapping developed a new tapping machine for



hex nuts and also added two mechanisms onto the original model, making it able to process the production of round nuts and flange nuts. Soon after the development, a famous rivet nuts manufacturer came to Unitapping and requested for the development of a thread pitch-lead reversible tapping machine, so Unitapping has been dedicated to the development of tapping machines since then. To date, the specifications of tapping machines manufactured by Unitapping include thread sizes ranging from 3MM-64MM and the tapping height is up to 180mm. 50% of the company's sales are contributed by the domestic market and the remaining 50% are contributed by export.

Unitapping's Tapping Machines can be put into 3 categories based on which type of part they are used for:

- (1) **Auto tapping machine using bent shank tap-** for manufacturing round nuts, flange nuts and hex nuts, suitable for mass production.
- (2) Auto tapping machine using straight shank tap- originally for super long nuts but is used currently by customers for tapping general round flange nuts or hex nuts because its nut releases freely after tapping not as bent-shank type. No damage on the appearance of nuts.
 - (3) **A: Vertical auto pitch-lead reversible tapping machine** (well suited for forming taps and pointed taps).
 - **B:** Horizontal auto pitch-lead reversible tapping machine (well suited for forming taps and spiral taps)

There are three types for pitch-lead control

- 1. Thread pitch controlled by the gear
- 2. Use pitch-lead screw



3. The above two need to be changed for different pitch requirements. We also develop dual servo pitch control system. Just input numbers on the panel and the machine will change the pitch operation automatically.

With a complete range of product lines and extremely excellent capacity, as well as advanced operation system with touch panels and more than 30 years of experience in manufacturing, Unitapping is always able to satisfy automatic tapping demands from different customers.

In Response to Future Demand

In order to follow the trend of energy saving and carbon emission reduction, the auto tapping machine using bent shank tap uses one motor to drive double-spindles tapping. As the loading force will only occur during nut tapping, only one motor is required if two spindles work alternately. Compared to one spindle with one motor or 4 spindles with 4 motors, nearly 50% of energy can be saved.

Relevant protective mechanisms and detecting systems can not only protect taps, but also prevent defective parts from being produced and increase yield rate.

Machine parts and toolings are easy to be installed and maintained. The training cost is low.

To meet both nut perpendicularity and quick production rate, we develop new UT type machine using bent shank type. Special patent clamping system to help achieve both goals.

In order to meet the demand from foreign buyers, Unitapping has completed the CE certification procedure for all its machine models. For keeping pace with the world's development trend, Unitapping will also continue to make every endeavor to facilitate the R&D of more tapping machines. The strict quality control and perfect customer service have both made Unitapping become the best partner for the production and technical consultation of customers.





Giant of Highly Efficient & Wellengineered Vibratory Feeder

Jenn Tai Machine Enterprise Co., Ltd.

by Michelle Hsieh, Fastener World

Jenn Tai has 30 years of experience in making vibratory feeders and the expertise in many fields. Its most popular product is the vibratory bowl feeder for screws. Besides the fastener field, Jenn Tai reaches out to clients in the food industry (like small packaging for dried seaweed/ peanut brittle/pastry), shotgun bullets industry, water filter parts industry, and daily supplies industry. It has clients from across the world. Most of them are from Asia, and the European and American clients are adding up.

Jenn Tai offers you fair price. It can even design special feeders in the way you want. It is your partner when you come across parts that are hard to feed. Also, it has more workforce than other similar companies to make a large number of machines for clients.

High Feeding Speed With No Quality Loss

Products today are getting more delicate and user-friendly, so makers have to pay very much attention to many details. Jenn Tai stands in the shoes of clients when it improves its product designs. The goal is to add more user-friendly designs and help clients reduce the time wasted on configuring machines. Each design takes a lot of time and hard work, because a brilliant idea popping up on your mind doesn't always mean you can quickly turn it into a product. To Jenn Tai, the hardworking part is to feed each object accurately at the highest speed. This involves the designs of bowl, wire coil and steel plate, and Jenn Tai has been studying and improving them because they affect each other. For high speed feeding and no damage to fasteners, Jenn Tai has its feeding bowls covered with special rugs. This prevents coating from peeling off from fasteners in the feeding process and reduces noise at the same time. That is why Jenn Tai is wellacclaimed in the market.

Recently Jenn Tai developed "Double **Ended Stud Orientation** Machine". Traditional vibratory bowl orientation machines may have 1%-5% tolerance, but "Double Ended Stud Orientation Machine" has zero tolerance and high efficiency to sort out the correct side and feed as fast as 110 pieces per minute. Double Ended Stud Orientation Machine is a huge step forward



compared to traditional vibratory bowls that work only at 30-40 pieces per minute. Right now, Jenn Tai is improving whole-barrel feeding process and straightening machines. It expects to finish this within this year.

Traditional machine models are more difficult to get on par with environment protection, because in machine manufacturing, it is hard to balance between environment protection and machine design/durability. Jenn Tai does everything it can to use materials compliant to governmental regulations and certification to reduce damage to the environment to the minimal level.

After-sale Warranty & Professional Assistance

Every customer who has purchased Jenn Tai's machines will have one-year warranty for non-human-made damage. In fact, many customers have gone past the warranty period, but with



a phone call Jenn Tai still makes its way to provide service for them. This is the consensus between Jenn Tai and customers. Jenn Tai responds to customers' needs immediately. It also simulates clients' operating environment to figure out the best feeding method and discuss with them.

In the booming Internet

era, people do searches on the Internet. Jenn Tai's homepage is a huge boost to its international sales. Jenn Tai communicates face to face with customers on many communication software. Unlike before, these software tools can quickly solve problems that would have taken 2 to 3 days. Jenn Tai's Shanghai branch, Shanghai Chen Hao Machinery Co., ltd, is dedicated to sales in China. This year in Jiaxin City of Zhejiang Province, Jenn Tai will build a second plant bigger than the Shanghai branch to satisfy the rising demand of Chinese customers.

Jenn Tai contact: Ms. Vicky Chen email: vicky@jenntai.com.tw

Dimac S.r

the Guarantee of 100% Inspection

by Gang Hao Chang, Fastener World



Italian Dimac S.r.l founded by President Carlo Agrati in 1988 is a worldly known company specialized in production and design of fastener inspection and sorting machines. With 30 years of company history, Dimac continues to offer high-quality machine models and impressive inspection & sorting solutions for various fasteners from standard parts to the most specific ones to its customers from various industries, particularly the automotive and aerospace.

Robust R&D Capabilities

Dimac has its own professional R&D team with the most talented technicians, who are able to come up with solutions that can satisfy all customers' needs and who are in partnership with the most important leading fastener manufacturers worldwide. The reputation of Dimac has become more widely known amongst professionals in the fastener industry since its first project "MCV1" was released in 1998. MCV1, which can be used to inspect a wide spectrum of cold forged and turned fasteners, is also its bestseller currently.

In order to deal with more specific needs from its customers, Dimac has also successfully completed many other "well-done" projects, such as the MCV2 for headed and headless fasteners, the MCV5-a glass plate machine with an accuracy up to microns, the MCV3 for medium and large-size parts, the first system for inprocess and post-process SPC Controls, the MCV4 for sorting two parts simultaneously, the MCV0 specifically designed for micro screws in electric/electronic and optical devices, the MCVBELT for solving pollution and mixed batches issues, and the new SPC-LAB.

500 Machines Installed Worldwide

Reaching the target of 500 machines installed worldwide (mostly in Germany) in 2015 is especially a



milestone for Dimac, which shows its outstanding strengths to offer "100% inspection and sorting" machines better than other existing producers.

In the 2016 Wire show in Düsseldorf, Dimac released a new user-friendly first-piece inspection plug & play mobile unit for in-process and postprocess measurements and controls- SPC-LAB, featuring an advanced, auto-calibration and nearly zero distortion accuracy vision system, with high resolution 5 Mpix - 2/3" cameras with collimated telecentric lenses and illuminators, mounted on a high precision engineering mechanics, and special tempered V-glasses anti-scratch to support the part while measured.

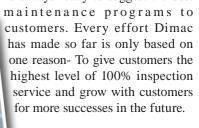
Green Light for Customers' Business

Helping customers increase the added value of their own products and service is very essential to Dimac. "Dimac aims to support customers

in qualifying and certifying their products by the use of the company inspection machines in order to minimize the unexpected production problems and increase performance and quality. Dimac image as "Green Light for Your Business" means essentially that when the light turns to green the parts have been sorted by Dimac and the customer can sleep well," General Manager Mr. Massimo Agrati said with confidence. The reputation of Dimac as an internationally recognized reliable machine supplier has been further strengthened over the past years and the intuitiveness and flexibility of its machines have been also greatly appreciated by customers.

Grow with Customers with Mutual Trust

As a customer-oriented company, Dimac seeks to establish mutual trust and partnership with each customer by offering real-time first-class service and prompt online technical advice. For Dimac, every customer is unique and should be carefully treated on a case-by-case basis. Dimac's maintenance & repair team is always ready to suggest the best







Top Level Tungsten Carbide Dies Supplier in India

KAY PEE DIES

by Gang Hao Chang, Fastener World

With its inception in 1968, the Ghaziabad, India-headquartered Kay Pee Dies, as its name implies, is a half-century old company specialized in the production and supply of high quality and durable tungsten carbide dies and wire drawing lubricants mostly used in fasteners, wire and related industries and applications. Founded by Mr. Harish Jindal, Kay Pee Dies has thus far achieved several successful results and amazing business performance in India's tungsten carbide dies industry, earned an industry-recognized reputation and is celebrating its 50th anniversary in 2017. Though facing so many challenges ahead and fierce competition from around the world, its business turnover continues to be on the significant rise every year.



The Industry Pioneer in India

Before becoming the pioneer of manufacture of tungsten carbide dies in the Indian industry, the founder Harish Jindal worked at leading India Hard Metal Pvt. Ltd. Kolkata and was in charge of technique development and manufacture of tungsten carbide dies, which later offered him a wealth of experience in the specific industry and made him able to initiate his own business at the right time. Prior to the establishment of Kay Pee Dies, most of the carbide dies demanded in the Indian market were mainly supplied by Wimet UK.

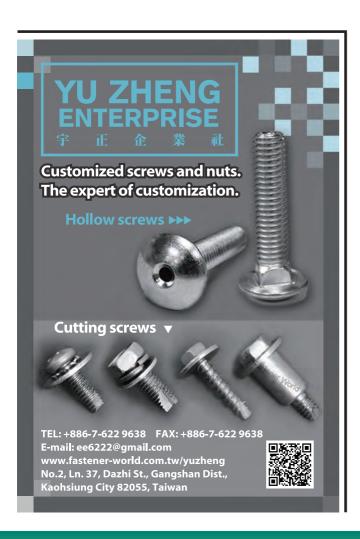


Irreplaceable Product & Service Offering



With the vision of "being the leader in India's die industry and establish a healthy and constructive partnership between die users and the manufacturer," Kay Pee Dies only uses the best quality of tungsten carbide available in the Indian market to produce molds that best suit customers' needs and requirements, which is why Kay

Pee Dies can always take the challenges and be outstanding to win customers' trust.



"Kay Pee Dies is managed by two qualified engineers (one has 58 years and the other has 16 years of experience in the industry). We also constantly upgrade our processes and innovate new products with regular visits and participation at wire shows around the world, such as Germany, USA, China and Thailand. In addition, we have a very high track record of retaining our customer base due to our irreplaceable quality, delivery and personalized service," Director Asim Jindal proudly says.

More International, More Collaboration

A great proportion of Kay Pee Dies' customers are from local India; however, Kay Pee Dies still has around 20% of its sales generated from the export to the surrounding countries or regions such as Nepal, Vietnam, the Middle East and Africa. The leading position of Kay Pee Dies was further strengthened after it built up a solid business partnership with Italian PAN Chemicals SpA in 2008. Since then, Kay Pee Dies has become a more international company, which not only focuses on the local Indian market but also the potential world market.

"Kay Pee Dies entered into a sole agreement with M/S Pan Chemiclas S.p.A., Italy for sale and distribution of their worldwide accepted wire drawing lubricants and surface coating compounds in India and SAARC countries. During the last over 8 years of this fruitful partnership we are now selling huge quantities of their products in a year and a faith and trust has been established to the extent that a proposal is under negotiation to start selective manufacturing of their products in India in joint technical and financial venture. This will save on freight and custom duty which account for roughly 25% of the landed cost," Director Asim Jindal noted.

The In-time Solution Provider

With the current huge demand for TC dies in India and the problems of short availability of quality dies and companies having foreign collaborators are recommended to import dies being used in collaborators' units, Kay Pee Dies could definitely play an essential role in promptly fixing these problems and providing its customers with the most appropriate solutions at all times. Kay Pee Dies is looking forward to an annual compound growth of 15-20% by supplying quality dies at the most reasonable prices and high-level service.

Director Asim Jindal concluded at the end of the interview, "While evaluating a die, cost per ton of product produced, cost of changing dies and consequent machine down time should also be compared/evaluated. Die suppliers are your partner in proper selection and usage of dies and Kay Pee Dies is always ready to offer their services in this direction."

Kay Pee Dies contact: Asim Jindal Email: asim@kaypeedies.com