



MISUMI News & Views

The customer magazine of MISUMI Europe

Success strategy

Systematic procedures instead of lucky breaks

MISUMI tutorials

Innovative training without any effort

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Aluminium frames and manifolds



Report from the engineering front line

Osai A.S., Italy

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Perfectly positioned

The main properties to be satisfied by assembly machines for electronic production are precision, speed and flexibility. Thanks to a rotatable assembly head which can accommodate up to eight exchangeable tools, the neoplace 400 made by the Italian special machine builder Osai A.S. sets the standards in this sector. MISUMI positioning pins ensure the highest levels of precision and excellent repeatability of programmed processes during tool changing.



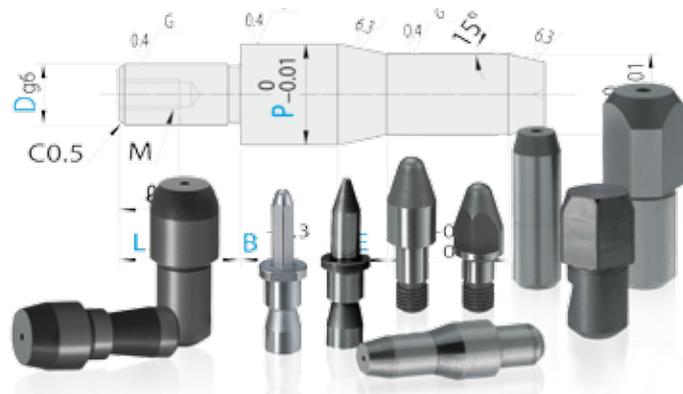
Assembly line for the automatic production of automotive subassemblies with modular constructions

Printed circuit boards (PCBs) play a key role in all areas of modern technology – including automotive engineering, domestic appliances, medical technology and entertainment electronics. The neo machine series built by the Italian special machine builder Osai A.S. is an extremely flexible, modular platform for the automated production of PCBs. The neoplace 400 is a very efficient assembly system for standard and odd-form components for the automated assembly of printed circuit boards. The heart of the 4-axis machine is a rotatable placement head which can be fitted with different grabbers for conventional components or special shapes, dosing tools for pastes or resins, as well as specific processing systems.

Perfect tool changing

The tools on the placement head can be easily exchanged when converting the machine to assemble different types of printed circuit boards. The perfect position of the tools here is vital to maximise the precision of the processes once they are programmed. “Once the positions are entered into the machine, they need to be retrieveable immediately and with the highest levels of repetition accuracy whenever the neoplace 400 is converted for a new product,” emphasises Dirk Striebel, head of the German Osai branch in Munich. Osai achieves this precision engineering feat by using MISUMI locating pins. When the programming for a new PCB type is loaded into the machine, the locating pins move automatically to the correct position to enable optimum assembly of a new grabber or tool. In addition to the high component quality and reliability, Osai also values the manufacturer’s service. “We have been working together with MISUMI since February 2009”, says Stefano Giorza, Osai product manager in Parella in Northern Italy. “We had been searching for a flexible partner for a long time. A partner who is also able to supply us with small quantities of high quality mechanical components with very short delivery times. Since then, we have been ordering a range of bushings and locating pins from

MISUMI which we use in our standard and customised machines.



Special demands for customised machines

Osai’s customised machine business also uses guide rollers, linear guides and other lathed metal components. “These types of components can be configured very flexibly and user-friendly thanks to the sophisticated MISUMI ordering system with coded types,” adds Striebel. “In the end, we have an article number for a customised component that can be supplied very quickly – even if we only need one item, which is often the case in customised mechanical engineering projects.”

The key to creating a component customised for the specific design, but still available at economical prices, is the MISUMI main catalogue with around 3,000 pages which contain all relevant information on materials, hardness, material properties, surface treatment, tolerances, delivery times, prices including volume discounts, as well as all the available additional options to enable the component to be adapted even more precisely to customer wishes. This allows the price of a component to be quickly and reliably determined, because MISUMI charges no



shipping costs within Germany and no hidden costs such as small volume order surcharges.

More new developments with MISUMI components

Osai also has plans in future to work with MISUMI components when developing new products for the electronics and semi-conductor production. In addition to the systems for electronics production based on the neo platform, the Italian mechanical engineering company is also involved in the construction of assembly cells and systems, as well as rotary tables for the automation sector. The company has also been developing and producing laser systems for microprocessing since 1995. Osai's laser systems are used for welding, marking, labelling, engraving, cutting and drilling in a range of sectors including vehicle, appliance and aircraft construction, medical technology and the production of electronics and jewellery.



Engineering personalities

MISUMI News & Views interviewed Dirk Striebel, head of the German Osai branch, about the personal highlights of his job.



■ Mr. Striebel, what was your first encounter with technology?

That is impossible for me to say precisely after such a long time. But I can remember that I used to exasperate my parents even when I was very young because everything that moved would be dismantled to find out how it worked. Putting the things back together though did not always work out properly. And – typical for my generation – I grew up with LEGO, Fischer Technik and Märklin railway sets. So it was pretty clear for me early on that I would pursue a technical career.

■ Which technical development impressed you most?

I have been particularly impressed by the developments in the computer sector, especially the pioneering spirit in the early days. When one looks how complicated, heavy, large and expensive the first computers were, and how little they were able to perform... It is remarkable in my opinion that there were development engineers who actually believed in this technology and pursued it to develop it further.

■ What is your personal milestone in your day-to-day business?

A very important milestone is to start the working day in a good and motivated mood. The surroundings naturally play a part in achieving this state of mind – both privately, but particularly also the mood in the office.

■ What was your biggest challenge and how did you solve it?

It is difficult to name one concerning my profession. The project business is repeatedly associated with major

challenges; the key then is to keep a cool head and analyse the problems systematically to find out their causes as quickly as possible and to correct them. In terms of my private life and sporting activities, my biggest challenge was my first triathlon – the Heidelbergman 2009. I was helped here in particular by one of my personal characteristics: having the will to achieve my personal objectives even if this takes me up to and even beyond the limits of my capacity.

■ Mechatronics is considered to be one of the key technologies of the 21st century – do you agree?

Mechatronics is undoubtedly a key technology. Increasing miniaturisation and the simultaneous rise in performance demands more than ever the combination of mechanics and electronics in extremely tight spaces.

■ Which technology do you think has the greatest optimisation potential in the near future?

In addition to further developments in IT and communications technology, as well as energy engineering, I think the issue of drive technology for vehicles is a very important subject. I see enormous optimisation potential here for today's technologies such as petrol and diesel engines, as well as the further development of alternative drive concepts.

■ Thank you for the interview!