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# Ohori Grinding



*The annual listing of 10 companies in Apac that are at the forefront of providing Precision Manufacturing Services and transforming businesses in the region*

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# Ohori Grinding

## Artisans Specialised in Ultra-High Precision Grinding



If an artisan has more or better tools, does that make him less of a craftsman?

Of course not.

But, it can be stated with a fair degree of certainty that the quality of the product lies almost exclusively in the craftsman's skills rather than the quality of the tool he uses. True craftsmanship can be modestly described as creating an object that embodies both art, which stems from talent, and science—a combination of training and knowledge. Keeping this ideology of craftsmanship and precision at its heart, Japan-based Ohori Grinding has carved itself the station of being one of the few enterprises that specializes in ultra-high precision grinding of components made of metal and other materials.

Founded 50 years ago, Ohori Grinding is now led by Ken Ohori, a leader who shifted the company's mission from mass production to prioritizing high precision and quality instead. With a team of approximately 40 skilled grinding technicians engaged in processing parts requested by clients, Ohori excels in delivering grinding services that are difficult even when using an NC program controlled by a computer. Although NC machine processing of parts has become mainstream worldwide, the technique of fine-tuning and finishing products while preventing deformations caused by heat and stress has become a rare skill and a highly sought-after art in the manufacturing industry. "Our philosophy is that 'anything less than 1/100 mm is the realm of a skilled technician,' and each day our grinding technicians are improving their processing techniques," says Ken Ohori, President of Ohori Grinding.

The most difficult part of the grinding process is controlling the amount of heat that is generated. Since metals expand and deform





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due to heat produced by friction, one must be familiar with each metal's deformations and thermal expansions when grinding. Despite this challenge, one of the core strengths of the Ohori team is its ability to grind delicate materials that other manufacturers cannot machine, such as aluminum—which is soft and difficult to grind—as well as stainless steel, titanium, and Inconel—an alloy of nickel-containing chromium and iron. Additionally, Ohori also offers V grooves, R grooves, polyhedral angles, external and internal grinding, and taper grinding, all in a shorter time than traditional CNCs.

Ohori Grinding has developed special methods of grinding metals and materials in all sizes, from large items of several meters to minuscule parts that could rest on a fingertip. While these grinding techniques remain closely guarded trade secrets, widespread usage of the company's precision grinding of metals in aerospace, F1 racing, automotive component prototyping, and medical technology can be considered proof of their effectiveness. Since 2016, Ohori Grinding has received orders from German and Swiss clients, and now, the company conducts business with over 500 clients worldwide. “We can meet customer requests that range from extremely small components to large objects, several meters in size. Our highly skilled technicians finish off the products using their delicate senses and ensure quality with a top-of-the-line inspection system. Our uncompromising attitude toward accuracy brings victory to our customers,” adds Ohori. The company recently delivered the ground shaft used in the engine of the F1 car, which won the world championship at the end of last year. The client needed

lightweight, high-strength parts to withstand an engine's high rotation speed, high temperature, and violent impacts. Ohori Grinding Company was able to respond to those requests with 1/1000th of a millimeter precision and now continues to meet the requests of F1 parts manufacturers with project teams composed of elite workers and inspectors (<https://youtu.be/FwRtiFv3L1k>).



Ohori Grinding's dedication to creating only the highest quality products sets it apart in a league of its own. In Japanese culture, craftsmen continue to hone their skills until they retire and pass on their skills to younger generations; and the Ohori team is firm in their belief that its technology will become more valuable in the world because it cannot be easily imitated.

To achieve the same, Ohori maintains another business on the second floor of the same site: An edible flower factory that not only rehires retired employees but also enables them to transfer their skills to the younger generation whenever needed in the workshop. The sight of the craftsmen quietly focused on their grinders, reflects a sense of the pride in workmanship that supports Japan's monozukuri (craftsmanship). In a world where manufacturing relies on NC control to process parts and people are being replaced by robots, Ohori Grinding stays committed to developing technologies that require the five senses and the keen presence of the mind of a skilled operator. 