

Precision Needles for Insulin Pumps – Precision Manufacturing

longer life-cycle achieved by using fine machining technologies and precision know-how.

Insulin pump manufacturing requires intense technical precision, especially when it comes to selecting the proper mechanical components.

There are very demanding regulatory requirements to consider, along with factors such as insulin compatibility and sterilization process compatibility.

The choice of identifying the correct material along with lifecycle expectancy is considered an obscure task.

The Challenge:

Device manufacturers are focusing on taking advantage of the growth and new technologies around the insulin-delivery device market. Working with suppliers that have the sufficient expertise and the latest engineering techniques is essential in order to bring innovation to market in the shortest time possible.

An Israeli start-up company that develops an innovative Insulin Pump for diabetic patients, reached to us in order to support them in an ultra-fine mechanical component, a precision needle which would be a consumable part with greater demand in the future.

The material needed to be wear resistance, economically cost-wise while using our know-how within the manufacturing of small precision parts made from various materials such as Tungsten carbide, various grades of stainless steel and different ceramics types.

The Solution:

Micro Point Pro proposed a custom made solution which would meet both client and in-house technology involved. The tip of the needle required extreme tolerances which very few manufacturers could reach, whereas **Micro Point Pro** offers grinding solutions of a wide variety of materials down to micron level tolerances.

According to our customer's evaluation, the needle produced by **Micro Point Pro** gave superior & exceeding results than other precision parts manufacturers, thus is mainly due to the vast expertise within the hard-materials and in making especially challenging geometries.

Key Points & Results:

Micro Point Pro strength lies in its high precision, accuracy for flatness, parallelism, concentricity and surface quality requirements. Customized solutions and micro tools are considered daily "bread & butter" with geometry capabilities and holes reaching as small as 0.02 mm with tolerances of ± 0.001 mm.

By using the in-house combined technology, we were able to support with the customer's complex requirements.

We have a long-term relationship within the precision parts for Medical industry, and serve top medical companies from R&D stage to mass production scope.

By using our precision capabilities, we managed to support client in prototype development and small volume manufacturing needed as a first stage prior mass production.

We succeeded in offering a complex solution while shortening time lead and most of all satisfying our customers.

Client information:

Medical Industry Clients – Precision Needles for Insulation pumps