Meeting the demand for high loads over 100N with an outer diameter of φ10mm

— Newly developed high-precision coiled wave spring manufacturing equipment for small-diameter, high-load applications —

In recent years, as devices continue to become more compact, there is a growing demand not only for space-saving in the thrust direction but also in the radial direction. This has led to a rapid increase in demand for springs that can handle high loads while maintaining a small coil diameter.

To meet these market needs, Nippon Stainless Spring Co., Ltd. has successfully developed a new coiling machine capable of mass-producing small-diameter, high-load coiled wave springs.

Traditionally, achieving high-load springs required increasing both the width and thickness of the material, which in turn necessitated a larger coil diameter. However, our newly developed equipment dramatically improves the rigidity of key mechanical components, enabling the production of springs that can withstand high loads even with a small diameter.

Furthermore, to address the issue of load variation—commonly associated with springs that have a high spring constant—we have incorporated our proprietary technologies to ensure high precision and stable product quality.

We are confident that this new equipment will contribute to solving the challenges of miniaturization and high performance in our customers' product development. We are happy to evaluate the feasibility of specific load requirements individually, so please feel free to contact us with any inquiries.

(Right figure: Reference model

—Outer Diameterφ12±0.05, Load 200N±5%)