



Sanwa Diamond Tools achieves a 5-fold increase in production capacity with an innovative Russell Finex screening solution

The installation of the Finex Ultima™ guarantees product quality and production efficiency in metal powder processing line

Established in 1994, Sanwa Diamond Tools is one of the leading diamond cutting tool manufacturers in India. With their two fully-equipped production facilities, the company manufactures a wide assortment of diamond saw blades, diamond segments, diamond drill bits and many more products. Sanwa provides the lowest cost of cutting without compromising any aspect of quality and also offers these products to customers as per their requirements. Sanwa Diamond Tools has created their reputation in the industry by using superior production machines to achieve consistency and quality.

In 2007, Sanwa started to SMP a Metal Powder Division for manufacturing powders including cobalt-chromium-tungsten alloy (stellite grade powders), copper-tin alloy, iron-copper alloy, iron-copper-cobalt-nickel alloy, pure copper, pure nickel, all grades of stainless steel and various copper and iron base alloys using a gas atomization as well as water atomization process to obtain powder particles. This powder is then sieved to separate the good fine powder from oversize particles. In order to increase output of these powders whilst separating into different fractions of powder particles, a high-performance sieving solution was needed, and the company turned to Russell Finex for assistance.

Sanwa is conscious about protecting a highly-regarded reputation for product quality. To ensure the quality of its tools, all aspects of the production line must meet high standards, including the metal powders used throughout manufacture. Previously, the company experienced efficiency issues with a standard round separator used to sieve the metal powders. Not only was it taking a long time to sieve the required quantities of powder, inconsistencies were being found in products and there were high levels of wastage, leading to increased costs. This was often caused by the powder sticking to the mesh, causing lower throughputs and powder having to be re-screened.

Due to increasing demand for its products, Sanwa approached Russell Finex to provide a **sieving solution** which could



Figure 1. The Finex Ultima™ installed at Sanwa Diamond Tools unit

- Increases production rates up to 50% more compared to traditional vibro separators
- Increases screening capacity and accuracy to improve product quality and productivity
- Unique rubber suspension mount for uniform sieving and quieter operation

not only achieve the high throughputs required, but also provide consistent product quality and easy operation. G.V Murli Krishna, General Manager, Production comments, "We selected Russell Finex due to the company's experience in providing premium sieving solutions for a wide range of applications. This reputation gave us peace of mind that we were in safe hands with an experienced supplier."



Following a consultation, Russell Finex supplied a high-performance separator for trial at both their own specialized testing facility as well as at Sanwa's production facility. The Finex Ultima™ successfully sieved cobalt and steel powders during the trials, resulting in the purchase of a 30" unit. G.V Murli Krishna said "We were under pressure to increase the efficiency of our production whilst ensuring a high quality of product. Choosing the Finex Ultima was a wise decision as it has helped us achieve a higher throughput whilst maintaining consistent product quality".



Figure 2. The Finex Ultima™ has a high-clean open frame design.

The Finex Ultima™ benefits from a unique rubber suspension mounting, which delivers maximum vibration and results in impressive throughput rates and sieving efficiency when compared to conventional round separators. The unit also has an open frame design for easy cleaning, reduced contact parts for quick and easy assembly and disassembly, durable stainless steel parts and reduced noise levels.

A mechanical screen deblinding system was also installed into the sieve to prevent powders blocking the mesh apertures. This allows material to flow freely resulting in consistently higher flow rates without compromising product quality. On this occasion, this combined screening solution achieved the desired throughput of 20 kg/hr, compared to the 3kg/hr with the previous machine.

G.V Murli Krishna concluded "With the installation of the Finex Ultima, our production rate has improved significantly, helping us meet our customers' demands with a high quality product and improved deliverability".

Russell Finex has been supplying solutions to metal powder and other fine powder producers around the world for more than 80 years. An innovative range of **sieving solutions** is available to enhance productivity and ensure product quality. The company serves a variety of industries in over 140 countries with applications that include fine metal powders, **food, pharmaceuticals, ceramics, chemicals, coatings** and many more.