

Autoconer Suction Nozzle Upgrade: More Yarn, Less Energy Use at Sanyang Textile



Sanyang Textile Co., Ltd., China, increased its yarn production by 3% and achieved energy savings of 13% thanks to a suction nozzle upgrade on their 32 winding machines Autoconer 338. The flow-optimized, aerodynamically designed suction nozzle enables efficient upper yarn search and pick-up from the package. This results in a 55% reduction in red light percentage and a significant reduction of the operator's workload.

The Challenge

Sanyang Textile is a leading supplier of fine yarns, with counts ranging from Ne 40 to Ne 120. In response to growing demand for knitting yarn, the company adapted its processes to meet evolving market requirements. However, due to intense competition, achieving high margins is challenging, pushing the company to reduce manufacturing costs. As a result, increasing productivity and lowering energy consumption became top priorities. The initial focus was placed on their 32 winding machine Autoconer 338, which have been in operation for more than 20 years. The customer was looking for suitable upgrade solutions to improve productivity and energy efficiency.

The Solution

Rieter After Sales recognized this opportunity and installed the suction nozzle upgrade on one machine as a pilot project. From the start, the new nozzle delivered impressive results, and Sanyang was highly satisfied with the performance. This led to a full-scale implementation of the upgrade across all 32 Autoconer 338, each equipped with 60 drums.

The old standard suction nozzles were replaced by new, flow-optimized and highly effective suction nozzles. Thanks to the aerodynamically optimized inner and outer shape, the new suction nozzle offers extremely efficient air guidance, resulting in reduced energy costs. It also enables effective upper yarn pickup even at reduced suction pressure, leading to lower energy consumption and improved operational efficiency.

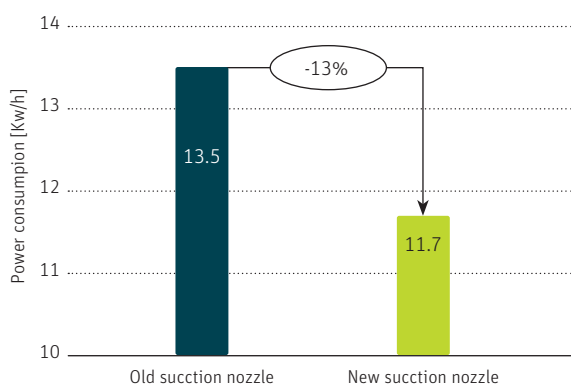
The Customer's Benefits

After the installation of the new suction nozzles, the performance of the Autoconer 338 improved significantly. The upgrade offers the following key benefits:

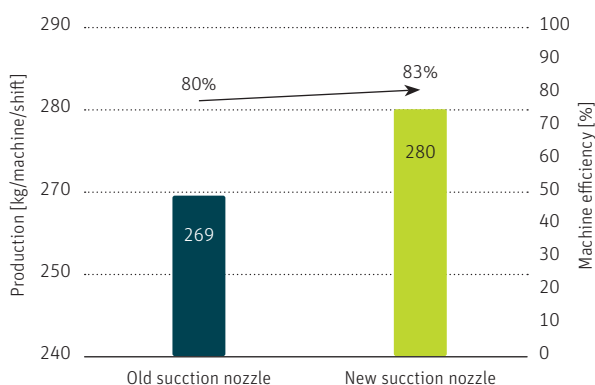
- 13% energy savings due to reduced suction pressure and lightweight nozzle design,
- 3% increase in machine efficiency, resulting in higher productivity,
- 55% reduction in red light percentage owing to effective upper yarn pick-up and
- 50% reduction in upper yarn search failure rate (SF).

With these improvements, the expected return on investment is under two years. Operator workload and maintenance costs have also been reduced, and the machine lifetime is extended.

Energy saving with the installation of new suction nozzle
100% cotton, Ne 60, Autoconer 338, 60 drums, 1 200 m/min



Increased productivity and machine efficiency with the installation of new suction nozzle
100% cotton, Ne 60, Autoconer 338, 60 drums, 1 200 m/min



Rieter Ltd.
Klosterstrasse 20
CH-8406 Winterthur
T +41 52 208 7171
machines@rieter.com
aftersales@rieter.com



The Customer's Statement

"We have seen a remarkable improvement in energy savings of 13% with the suction nozzle upgrade. The enhanced upper yarn search increased machine efficiency by 3% and reduced operator workload. This upgrade significantly strengthens our market position."

Zhang Sheng
Chief engineer at Sanyang Textile Co., Ltd., China

Sanyang Textile Co. Ltd.
58 Yong Shen Road
Lijin County
Dongying City 257400
Shandong Prov.
China
T +86 54653 68006
F +86 54653 68001

The data and illustrations in this brochure and on the corresponding data carrier refer to the date of printing. Rieter reserves the right to make any necessary changes at any time and without special notice. Rieter systems and Rieter innovations are protected by patents.

3820-v1 en 2508

www.rieter.com