

Tailor-made for the sock sector

As the demands of the sock and hosiery markets continue to evolve, Italian sock knitting machine builder Busi Giovanni has made considerable advances in developing new technology and upgrading its existing models.

Busi Giovanni began its exploration of single cylinder sock knitting machine with rib needle in the dial in 1967 and from that point, has become renowned throughout the industry as a company clearly devoted to true rib machines.

This reputation is exemplified by the development of the latest Busi Medical, which is designed for the production of certified compression knee-high socks. "This high production, single-cylinder sock-machine with latch needles in the dial is capable of producing true rib and plain stitch medical compression socks in 5 colours with compression classes 1, 2, 3 and it is provided with full electronic control," explains Busi's Export Manager, Michele Castagna.

The machine is provided with two knitting feeds for both plain stitch and true rib. The compression graduation is achieved by using the automatic stiffening, which is available on all the step-motors and by graduating the tension of the inlaid elastic yarn.

It is also available with the company's new Rimaglio device for toe closing which, says Castagna, makes it the only company that can offer a true linking toe closing solution with such a fine gauge (26G).

Up to this point, the Busi Medical has been available in diameters - 3 1/2", 3 3/4" and 4", with between 180 and 320 needles and in gauges 48, 54 and 70G. The maximum speed of this machine is 300 rpm.

Now though, Busi Giovanni has made this machine available in a 4 1/2 diameter widening the machine's appeal. "The market is demanding this larger diameter, so we

have responded with the 4 1/2 inch version finalised by the end of the year and commercially available by 2015."

Castagna said, adding that the intention is also to produce a 5 inch version, which will also allow the production of tights rather than just knee-highs.

As this machine can produce compression socks in classes 1, 2 and 3, Busi Giovanni is able to count some of the market's leading medical hosiery suppliers as customers. One such customer is France's Gibaud, which has produced its latest collection of aesthetically pleasing medical socks, named Confort Tech, entirely on the Busi Medical, a part of the business that now accounts for around 20 per cent of the French firm's total turnover.

Busi Giovanni has also developed the Busi Medical Terry. This model is designed for the production of compression knee high socks and is equipped with a terry device for the manufacture of medical items with enhanced comfort features.

The machine is provided with 2 knitting feeds for both plain stitch and true rib.

The compression graduation is again achieved by using the automatic stiffening, which is available on all the step-motors and also by graduating the tension of the inlaid elastic yarn. The terry device also enables



The Busi Medical equipped with Rimaglio device

the fully automatic switching from plain stitch to half terry and to full terry.

The machine can also produce compression socks in class 1, 2 and 3 and can also be equipped with the Rimaglio device for toe closing if required.

Available gauges are 36, 48 and 54 and diameters of 3 1/2, 3 3/4 and 4 inches (with the 4 1/2 ins available next year), with 180 to 240 needles. Possibilities include 1x1 true rib welt, double welt and the ability to

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switch from inlay to knit for the elastic in the same course.

Also possible is an embroidery pattern on a mock rib base with 5 colours per course plus the ground and an embroidery pattern on a mesh base again with 5 colours per course plus the ground.

Mesh pattern in two feeds as well as true rib fabric and sandwich terry can also be produced.

"These are very flexible medical machines," Castagna says. "We expect a good number of our customers to switch to these types of products, as the demand for high quality medical compression socks increases, so sock producers will invest in high-quality machines in order to meet those standards."

So with the technology in place, Busi Giovanni's most immediate issue is production capacity and being able to provide short enough lead times to keep customers happy. With a capacity to build around 200 machines per year at their Brescia headquarters, the aim of Castagna and managing director Gianmario Busi is to increase production capacity by at least 30 or 40 per cent in the near future but, importantly, not at the expense of the build quality for which the company is renowned.

However, without wanting to increase floor space at their existing site, Busi Giovanni's plan is to outsource some of the part-building work to contractors in the immediate Brescia area. Importantly, this will only be with companies with the requisite know-how to ensure that the expected build quality retains the highest possible standards.

"Some of the work will be done elsewhere with the parts then transferred to the main facility for final assembly and relevant quality controls", Castagna explains, adding that the intention is to raise capacity to 250 machines by 2015 with further increases possible after that.

This growing demand is also triggered by Busi Giovanni willingness to listen to its customers requests and develop technology based on those needs. "We had requests from our customers for a machine without rib and no needle on the dial", Castagna says. "The result of which was the development of the Busi Light MP, a high production single cylinder machine for the production of simple socks for men, women and children."

This machine is capable of knitting both plain and terry fabric with the needle selection made by 7 electromechanical actuators that enables the production of



Samples from the Gibaud Confort-Tech collection for the sports sector

double welt, embroidery patterns in 4 colours plus the ground, embroidery patterns on a mock rib elastic base in 4 colours plus the ground and floated mesh patterns with additional 4 colour patterns.

The Light MP is also equipped with a striping unit and with a terry device for the production of sandwich terry; it is also possible to produce plain stitch, half terry and full terry in the same sock without the need for any manual change.

Available in diameters 3 ¼, 3 ½, 3 ¾ and 4 ins in gauges 24, 36 and 48 with up to 168 needles, the Light MP has proved particularly popular in markets such as China, Bangladesh and Vietnam where sock knitting mills have varied their production possibilities by installing a mixture of different machine types.

Despite these increasing demands though, Busi Giovanni is certain where its future lies and the metaphor seems appropriate. "We want to remain as 'tailors' to the industry", says Castagna confidently. "We don't want to be in a position where we have to produce 2,000 machines a year. Our ethos is to remain as a family company, renowned for its high quality technology. That is how we will behave, both in the near future and in the long term." **KTJ**



Samples from the Gibaud Confort-Tech collection