

# Sustainability that pays off.

spinitystems technology spins, cleans and knits in one



The Spinit 3.0 E combines spinning, cleaning and knitting in one machine

Spinning and knitting have always been strictly separate operations, both technically and ideologically. spinitystems technology combines the two processes in one machine the size of a conventional circular knitting machine. The Spinit 3.0 E spinning and knitting machine also does the cleaning, while rewinding is no longer necessary. That makes spinitystems a 3-in-1 technology that saves time, energy and resources.

Manufacturing a fabric like those that are used to make t-shirts, for example, normally takes several consecutive, separate processes. After various preparatory steps the cotton fibre is spun into a yarn on ring spinning machines – a step that is space- and energy-intensive. Next come rewinding and cleaning, which are handled by the winding machine.

Only then comes the final process stage, knitting itself. In spinitystems Mayer & Cie. has developed a technology that combines spinning, knitting and cleaning in one machine. The first machine to be equipped with this 3-in-1 technology is the Spinit 3.0 E.

Unlike a conventional circular knitting machine the Spinit 3.0 E processes roving rather than finished yarn. The fibre bundle is drafted in the machine's electronic internal drafting system. In the following false twist process it is given a twist that disintegrates before it reaches the needles.

Roving can be knitted thanks to relative technology, developed by Mayer & Cie., which handles the yarn very gently. In addition to saving time, using roving has a further advantage: roving leftovers are not waste and can be returned to the spinning process.

Because the spinitystems technology combines three processes the entire manufacturing process is significantly shorter. That is accompanied by a lower energy outlay.

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Compared with the conventional manufacturing process the Spinit 3.0 E uses about 30 per cent less energy for the same output, which naturally has a positive effect on the machine's energy and CO<sub>2</sub> balance.

A further benefit is the reduced space requirement. While a ring spinning machine alone can be up to 70 metres long, the dimensions of the Spinit 3.0 E are similar to those of a conventional circular knitting machine.

## Facts:

- Electricity cost savings of up to EUR 0.15 per kilogram of Spinit single jersey
- A carbon dioxide reduction potential of 0.96 kg of CO<sub>2</sub> per kilogram of Spinit single jersey
- Returning roving leftovers to the spinning process creates savings of up to EUR 0.05 per kilogram

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