

New yarns with lower costs:

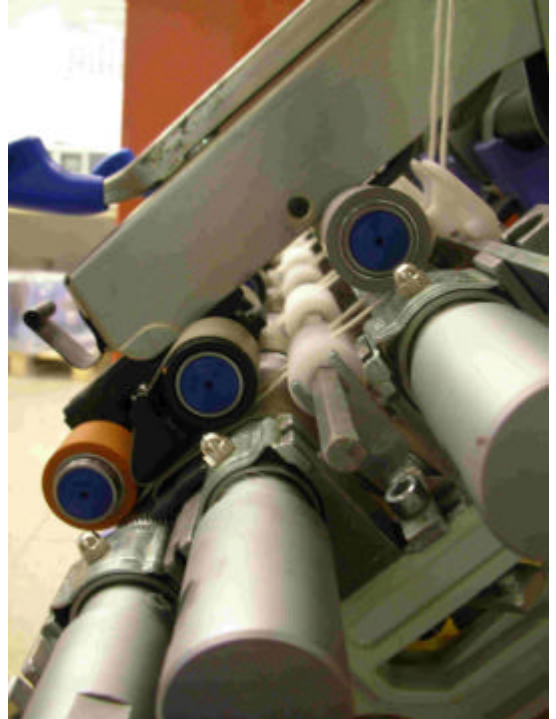
PINTER DOUBLE ROVING SPINNING. DUO

Yarn which is generally used for weaving is a two-fold yarn, since it is evenner and more resistant than a single yarn.

Today's market is requiring the reduction of processing costs, to be competitive. For that reason, Pinter has developed **Duo**, a cost – saving technology combining spinning and doubling in one operation. Apart from cost advantages, **Duo** provides the spinning industry with new possibilities in terms of design and technical uses of yarn.

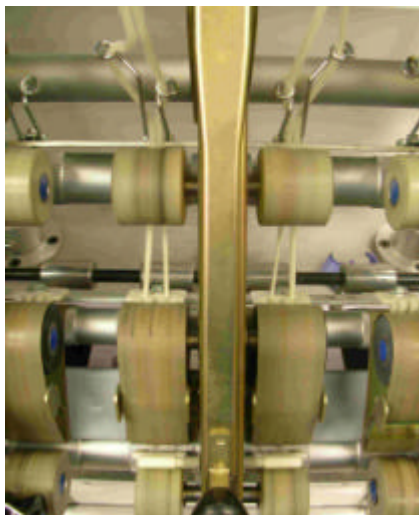
Working principle consists of the feeding of two rovings in one drafting position and varies slightly for short and long staple fibres:

- **For short staple:** the rovings are kept and drafted separately on the ring frame, which is equipped with special drum condensers. The distance between both roving strands can be adjusted by this adaptable condenser. Spinners have a total control of the process because they can set the correct position depending on count, material and end use of the yarn.
- **For long staple:** the roving condensers are fixed because a regulation is not necessary. Additionally a security mechanism to prevent one ply yarn is included.



Once the two individual strands exit the drafting system, they each get some twist, before they are joined and twisted together. A triangle is formed, and its size will depend on **Duo** distance setting.

Resulting yarn will be like a two-ply yarn, but with unidirectional twist, and will be prepared to withstand the weaving process.



Advantages of Duo

In respect to ply yarn: important reduction in spinning costs (more than 50%).

In respect to single yarn:

- Possible use of **Duo** instead of two-ply yarn in multiples applications.
- Better mass evenness and yarn strength values; important decrease of thin places of 50%; circular yarn section.
- Lower hairiness.
- Lower pilling tendency.
- Smoother yarn surface.
- Better resistance to abrasion.

Long staple draft layout

- Better colour and printing definition in woven fabrics.
- Lower tendency of yarn striping in knits.

In respect to other systems of yarn doubling in the ring frame:

- Total control of the yarn: adjustable distance between roving strands.
- Taylor-made system: Pinter can supply from individual pieces to complete adaptations, including creel modification and in-house assembly



Where Duo may be installed, and which fibres can be processed?

Duo can be adapted to any existing ring frame, cotton drafting system as well as worsted, for processing any textile fibre able to be spun on it. **Duo** may be purchased in different stages, so that flexibility is very high to meet spinners' needs:

- Set of special **Duo** condensers (with middle roller condensers setting mechanism).
- Set of **Duo** condensers plus breakage mechanism.
- **Duo** with breakage mechanism plus creel parts (roving bobbin hangers, creel bars, upon request).
- Complete system, taylor-made design, including all parts, adaptations and installation on the ring frame.

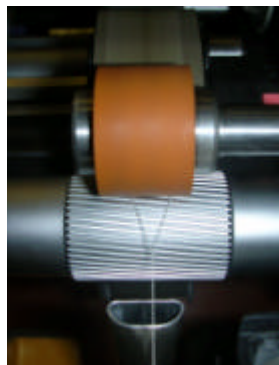
In addition, **Duo** has been designed to work with the other Pinter products such as Core Spun (elastic, non elastic and semi elastic) and the different systems for fancy yarn. All these possibilities are opening a wide field for the creation and development of future products and applications.

Applications of Duo

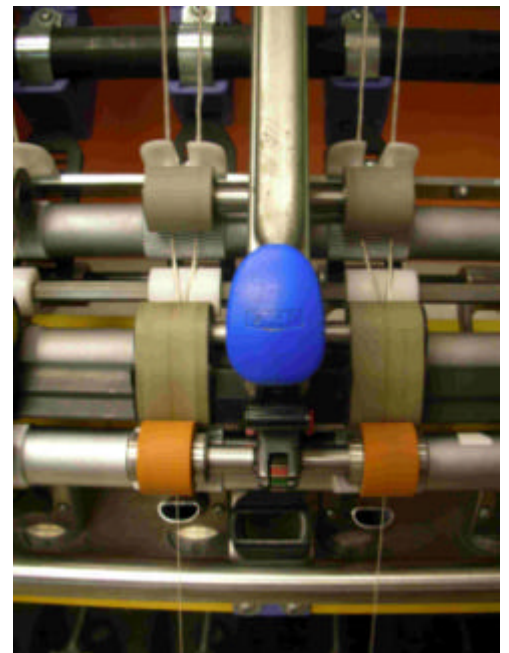
There are many different uses of **Duo**, improving fabric quality and weaving process respect of the normal or ply yarn; today's more extended uses are, in worsted, suits, jackets and trousers (wool, polyester – wool, acrylic wool). In short staple, shirts (cotton or blends with polyester or viscose), from medium counts (Ne 60/2) to fine counts (Ne 120/2).



Long staple knock-off device



Short staple spinning triangle



Short staple draft layout