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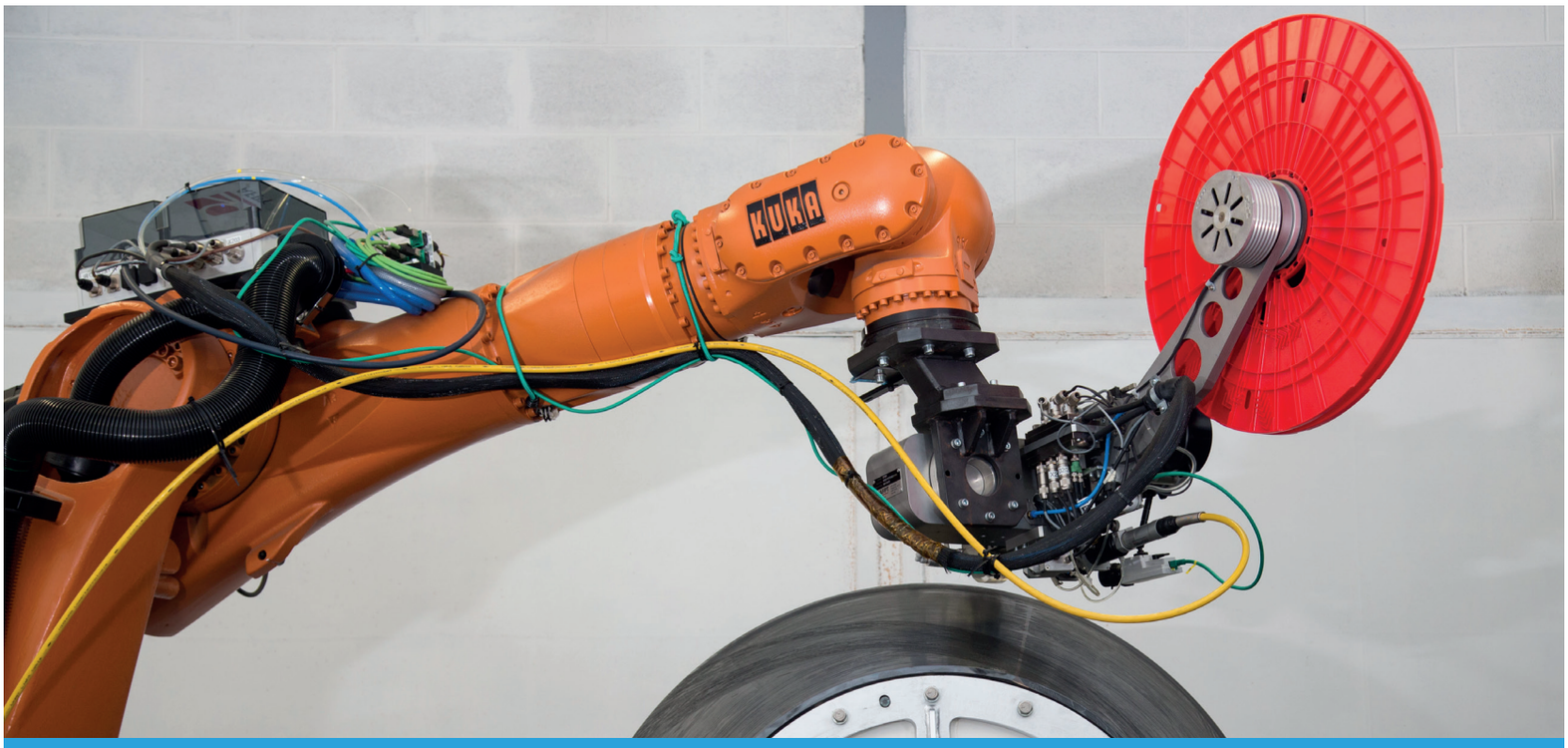


# Automated tape placement (ATP)

**Automated tape (fibre) placement is an advanced method of manufacturing composite components. This technology offers significant advantages over traditional techniques.**

- Increased productivity
- Superior accuracy and precision
- High volume capability
- Capability to produce complex geometries

As a result, the ATP process is widely used in the aerospace industry and is extending into other sectors.

**The state of the art IComp ATP facility for thermoplastics offers opportunities for:**

- Collaborative R&D programmes to drive this important cutting edge technology forward in terms of materials, machine and process innovation
- The development of high value added manufacturing processes which can exploit the unique characteristics of uniaxial fibre-reinforced thermoplastics to optimise the performance, weight and cost of composites
- The manufacture of prototype composite structures across all relevant sectors

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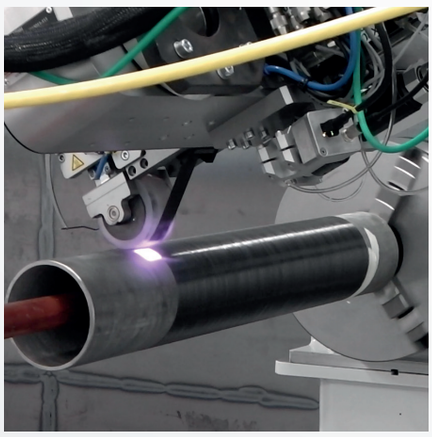
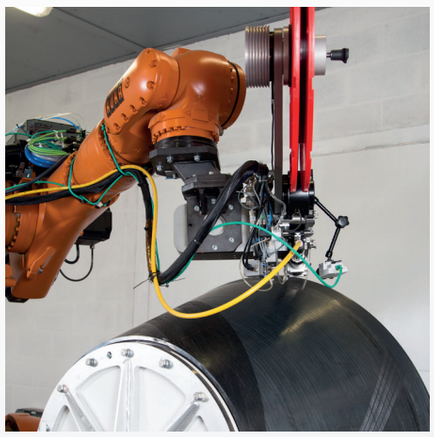
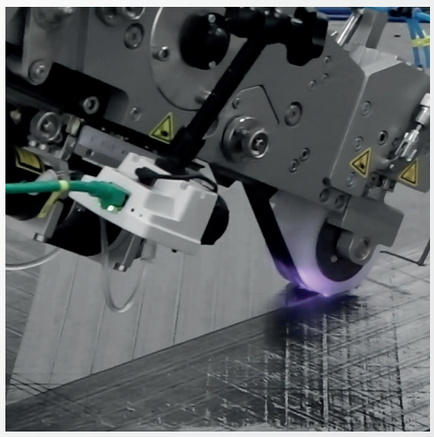
# Automated tape placement (ATP)

**Features of the IComp ATP machine include:**

- Laser heating of thermoplastic prepreg to give maximum process control and laydown rates for tapers from 6mm to 25mm width and 0.7mm thickness.
- Accurate monitoring of the prepreg temperature in real time with lay-down rates ranging upwards from 0.5m/s
- 6-axis industrial articulated arm robot with 210kg payload and 2.9m reach
- Winding spindle with capability to handle tools up to 3m in length, 2m in diameter and 2 tonne weight
- Head motion to give 50mm minimum stroke of stainless steel compaction roller of 60-80mm diameter at 400N maximum force
- Speed of 500mm/s for 0.2mm thick tape
- Heated tools can be used up to 300°C with the above systems







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