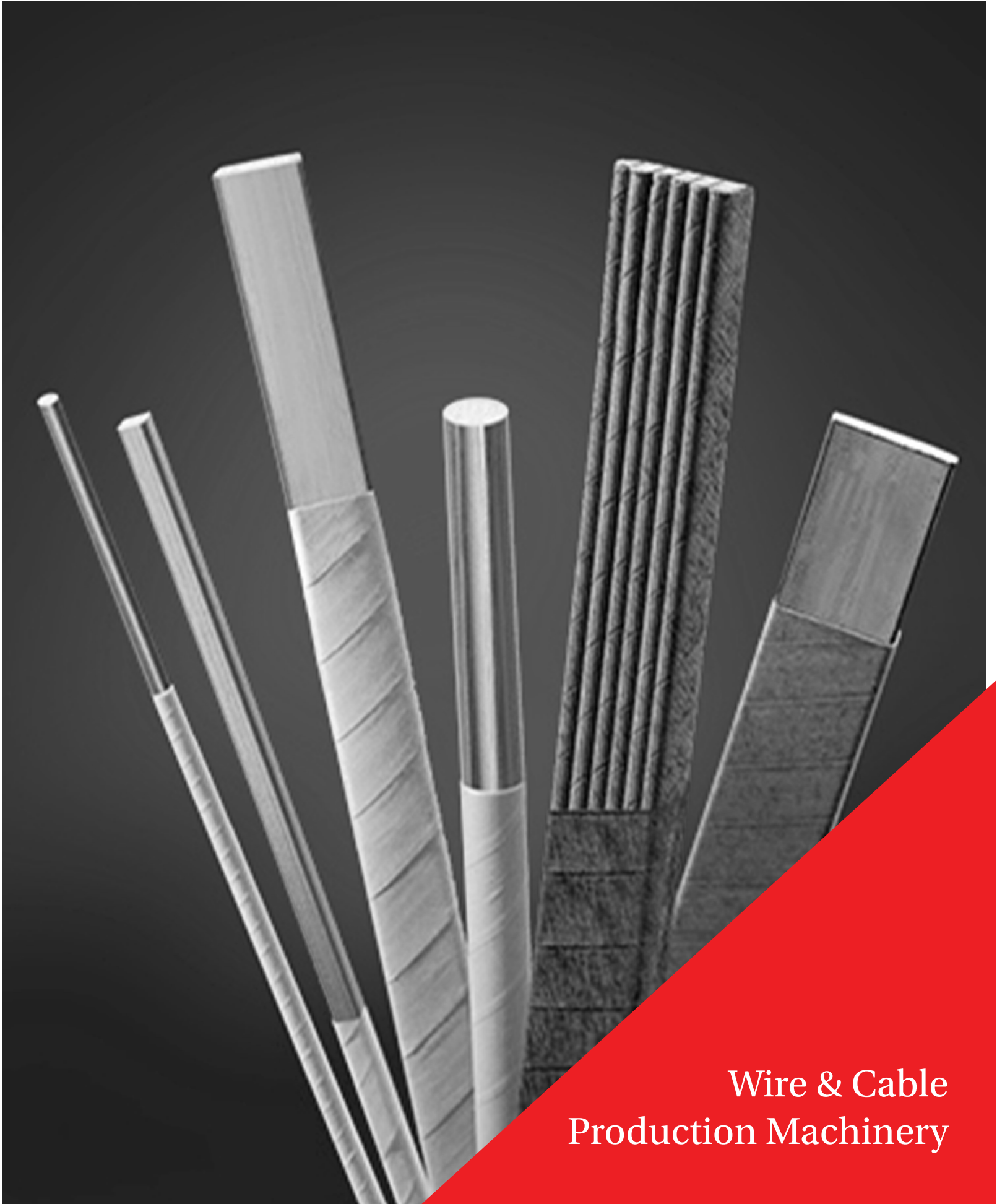
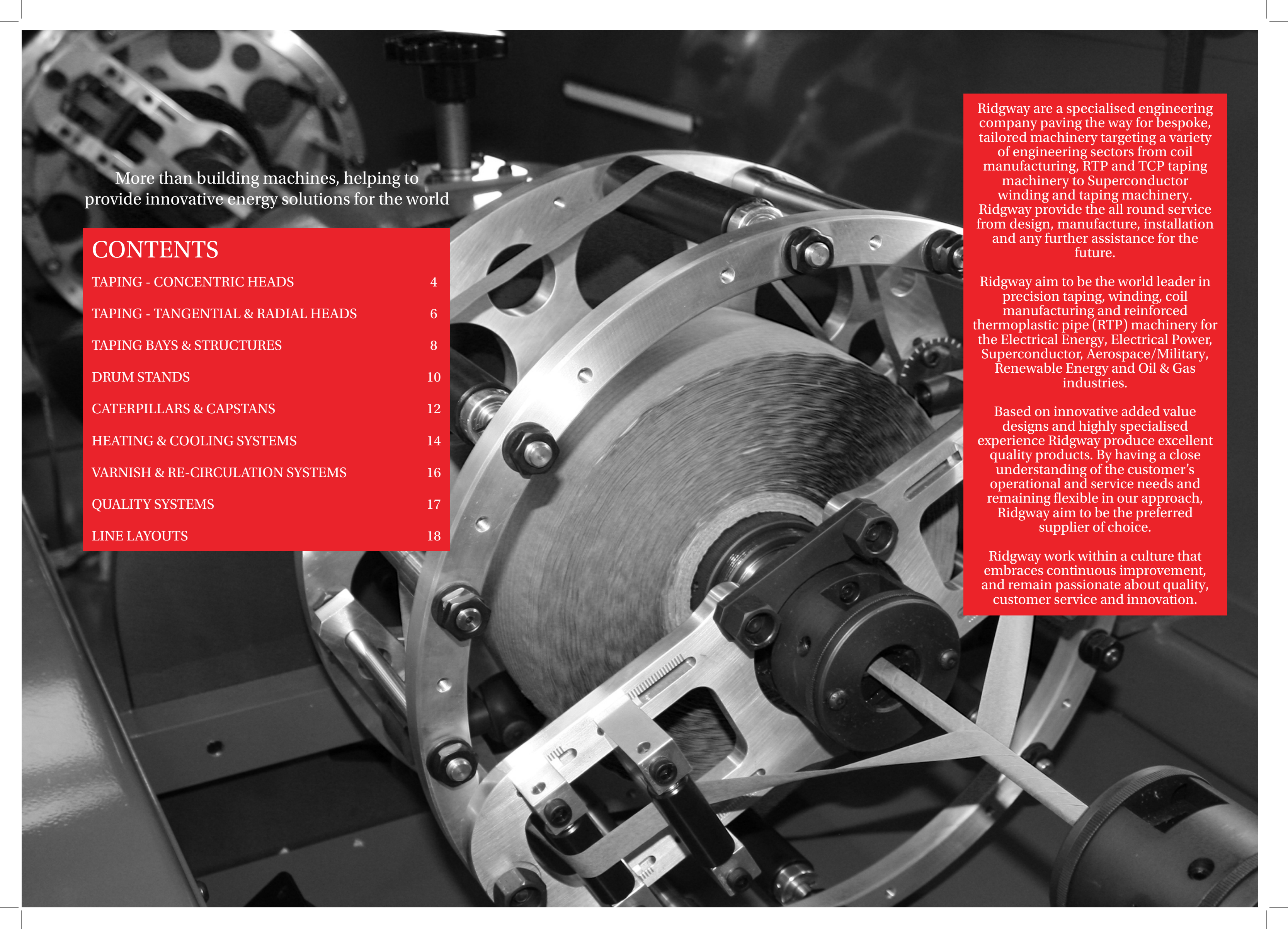




Ridgway Machines



Wire & Cable
Production Machinery



More than building machines, helping to
provide innovative energy solutions for the world

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Ridgway are a specialised engineering company paving the way for bespoke, tailored machinery targeting a variety of engineering sectors from coil manufacturing, RTP and TCP taping machinery to Superconductor winding and taping machinery. Ridgway provide the all round service from design, manufacture, installation and any further assistance for the future.

Ridgway aim to be the world leader in precision taping, winding, coil manufacturing and reinforced thermoplastic pipe (RTP) machinery for the Electrical Energy, Electrical Power, Superconductor, Aerospace/Military, Renewable Energy and Oil & Gas industries.

Based on innovative added value designs and highly specialised experience Ridgway produce excellent quality products. By having a close understanding of the customer's operational and service needs and remaining flexible in our approach, Ridgway aim to be the preferred supplier of choice.

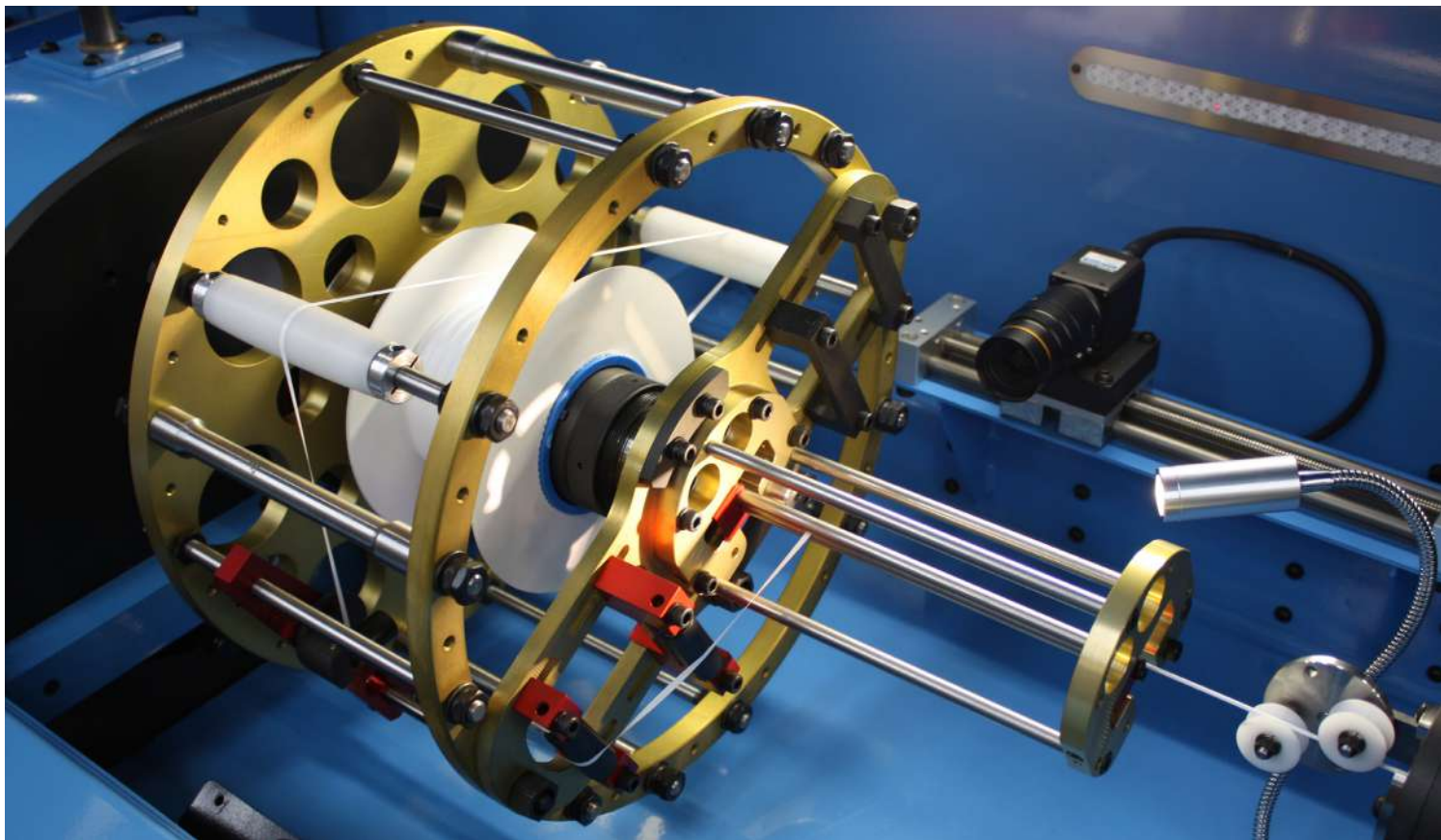
Ridgway work within a culture that embraces continuous improvement, and remain passionate about quality, customer service and innovation.

Ridgway Machines design and manufacture a wide range of concentric heads capable of applying tapes to round, rectangular or sector type products.

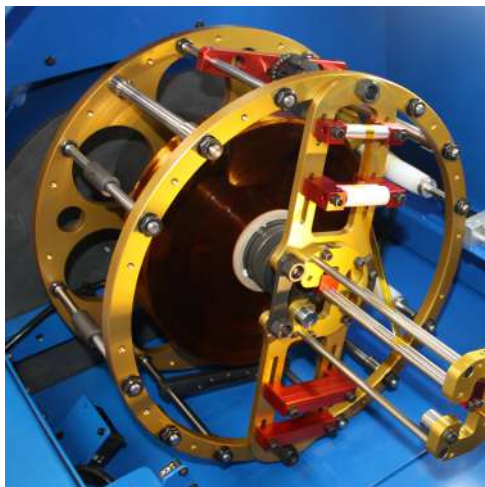
Precision tape tension, combined with accurate tape laying and fast head speeds make concentric heads an ideal solution to meet application requirements.

Key features:

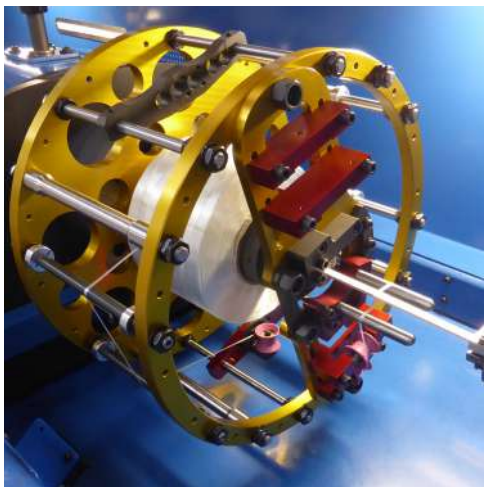
- ◻ Twin servo technology
- ◻ Head synchronisation to caterpillar
- ◻ Heads speeds up to 2,500 RPM
- ◻ Active tape tension control
- ◻ Tape break detection
- ◻ Low pad detection



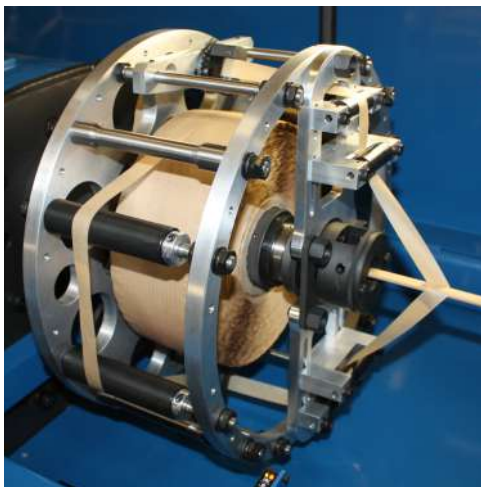
PTFE Head with Fine Wire Guide & Camera System



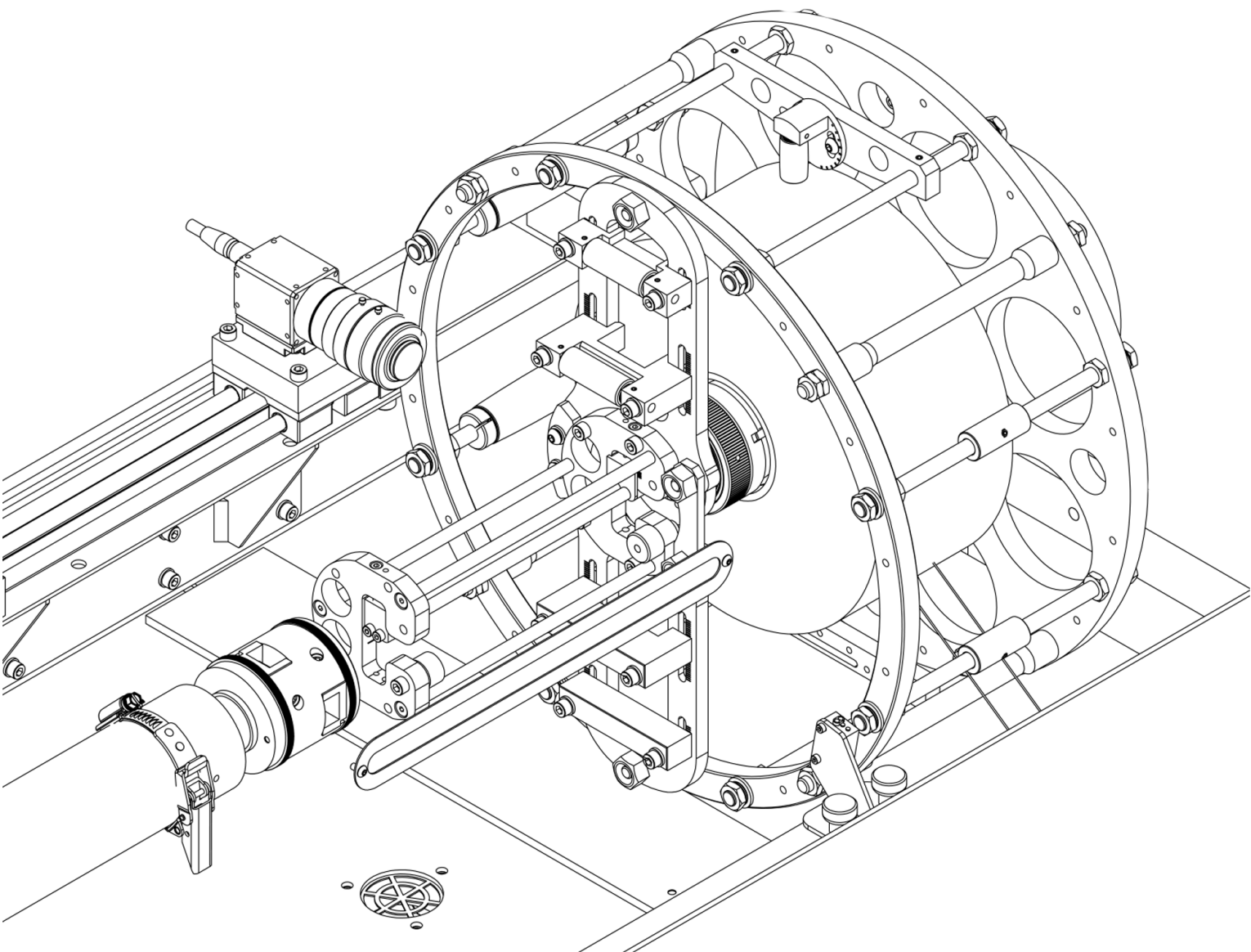
Kapton Head



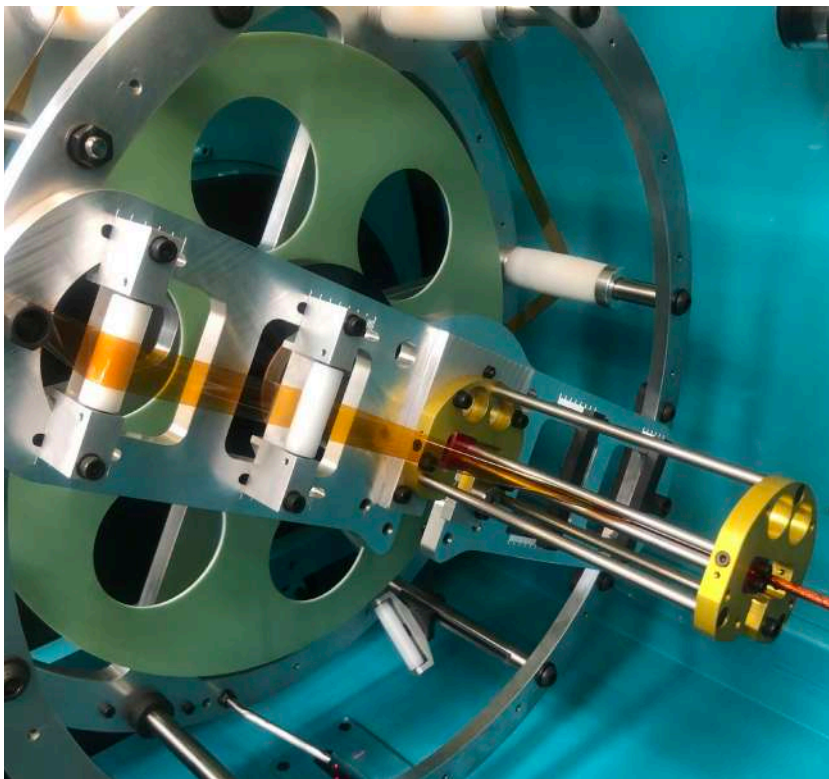
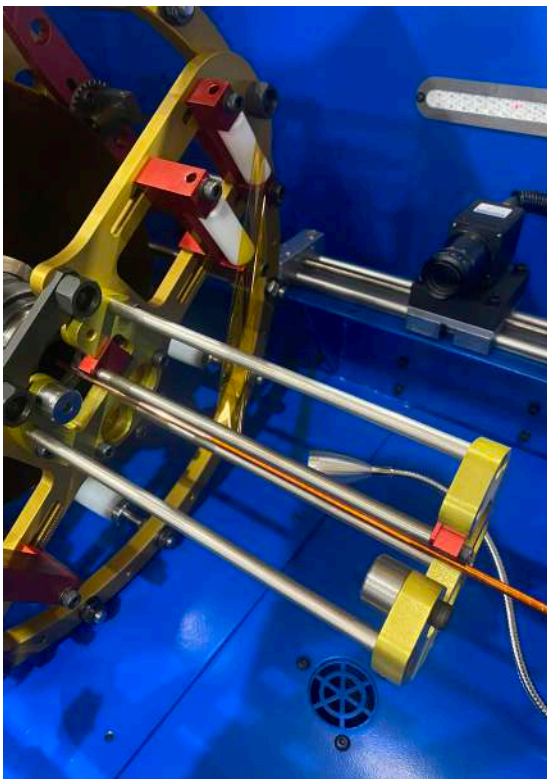
Fibreglass Head



Multi-Ply Head



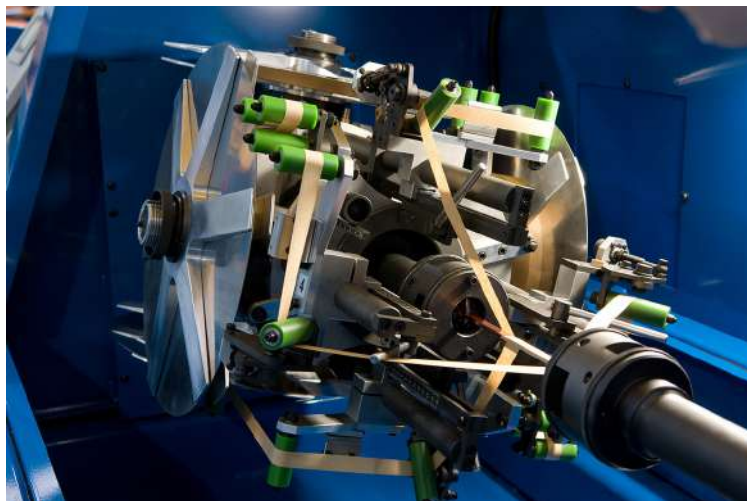
The Fine Wire Guide is used to help steady the wire to ensure high quality and high speed during the taping process. Ideal for applications below 3mm in diameter.



TAPING - TANGENTIAL & RADIAL HEADS

Tangential heads are an ideal solution for applications where multiple tape pads are used simultaneously.

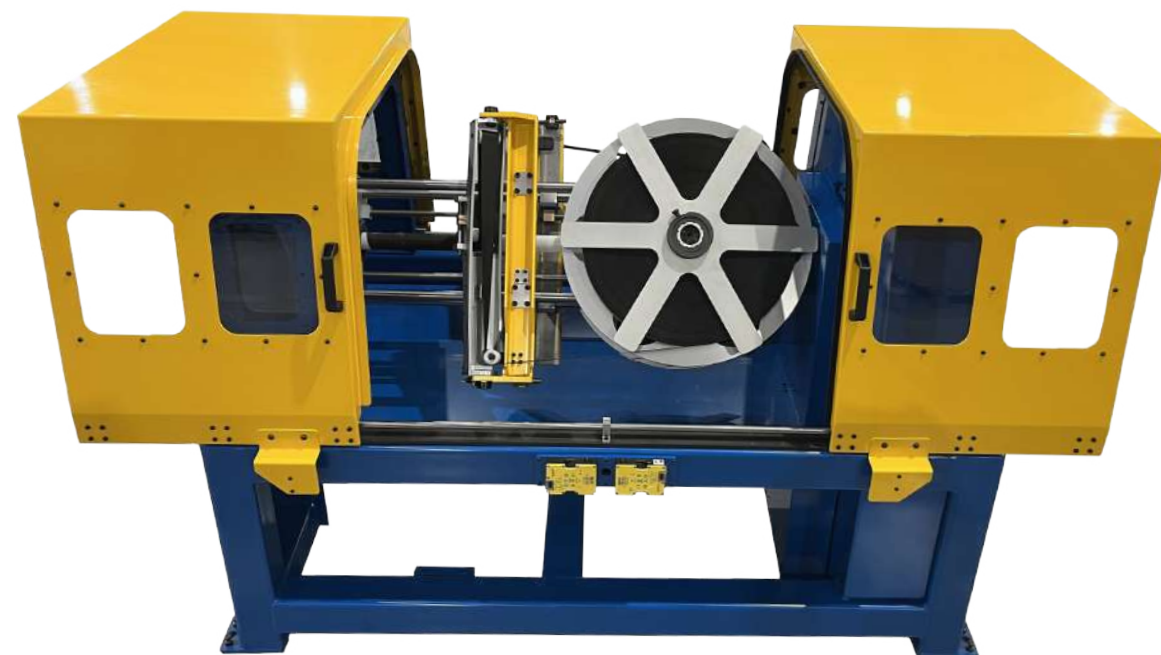
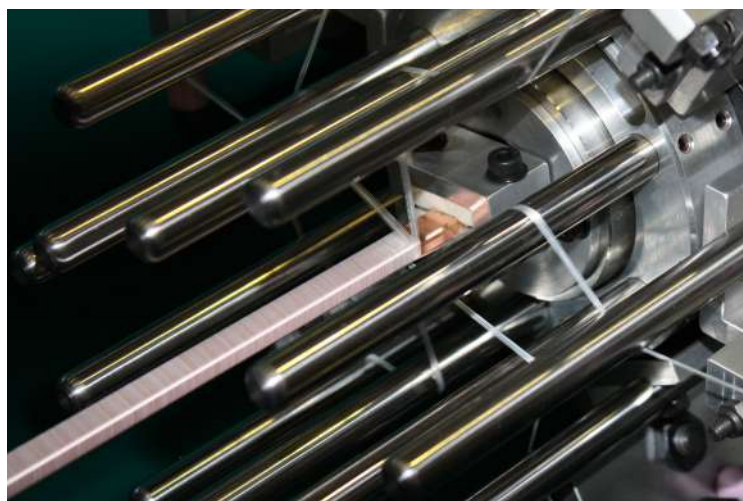
Flexibility in design allows for a wide range of options including, number of pads, larger pad diameters, increased tape widths and thickness's.



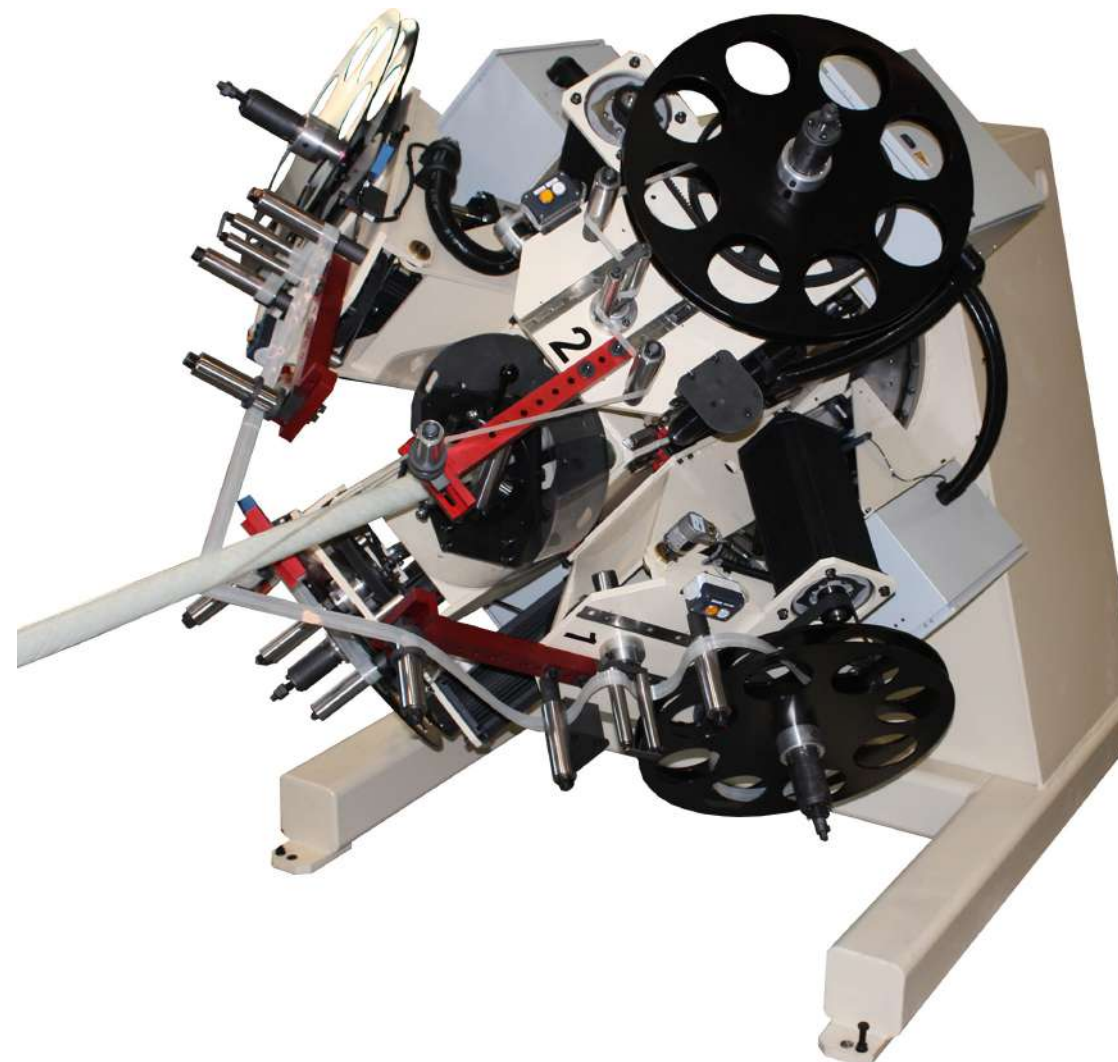
4 Pad Head, ideal for high insulation build applications. Head speeds up to 1000 RPM



6 Bobbin Glass Taping Head being used for applying glass yarn



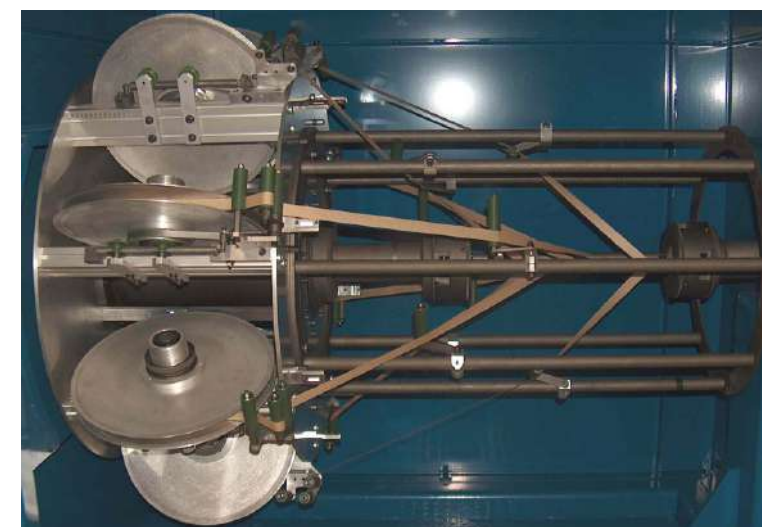
2 Pad Head used for cable taping, utilising tape pads 700mm in diameter



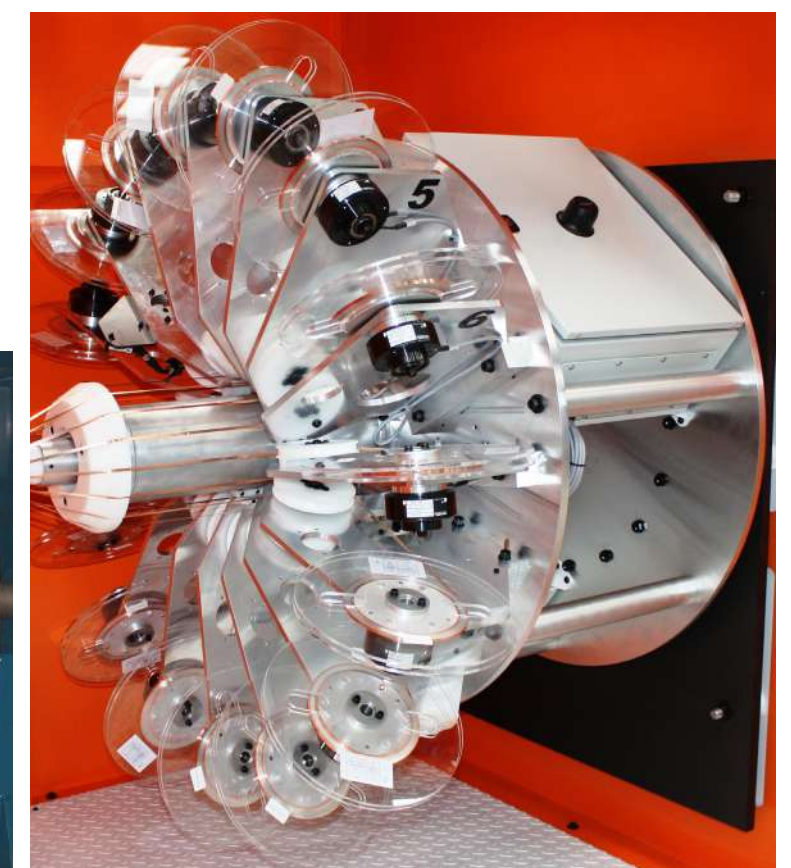
4 Pad Radial Head applying tapes up to 160mm in width onto cables up to 230mm in diameter. Tape pads up to 700mm in diameter 50kg in weight.

This machine incorporates wing plates to angle each tape to the desired taping angle, this helps to prevent twisting of the tapes and is ideal for applications utilising thicker and wider tapes.

Different tensioning systems can be utilised on these heads, including mechanical, electro-mechanical and servo systems.



8 Pad Radial head using tape widths up to 60mm and up to 400mm diameter pads

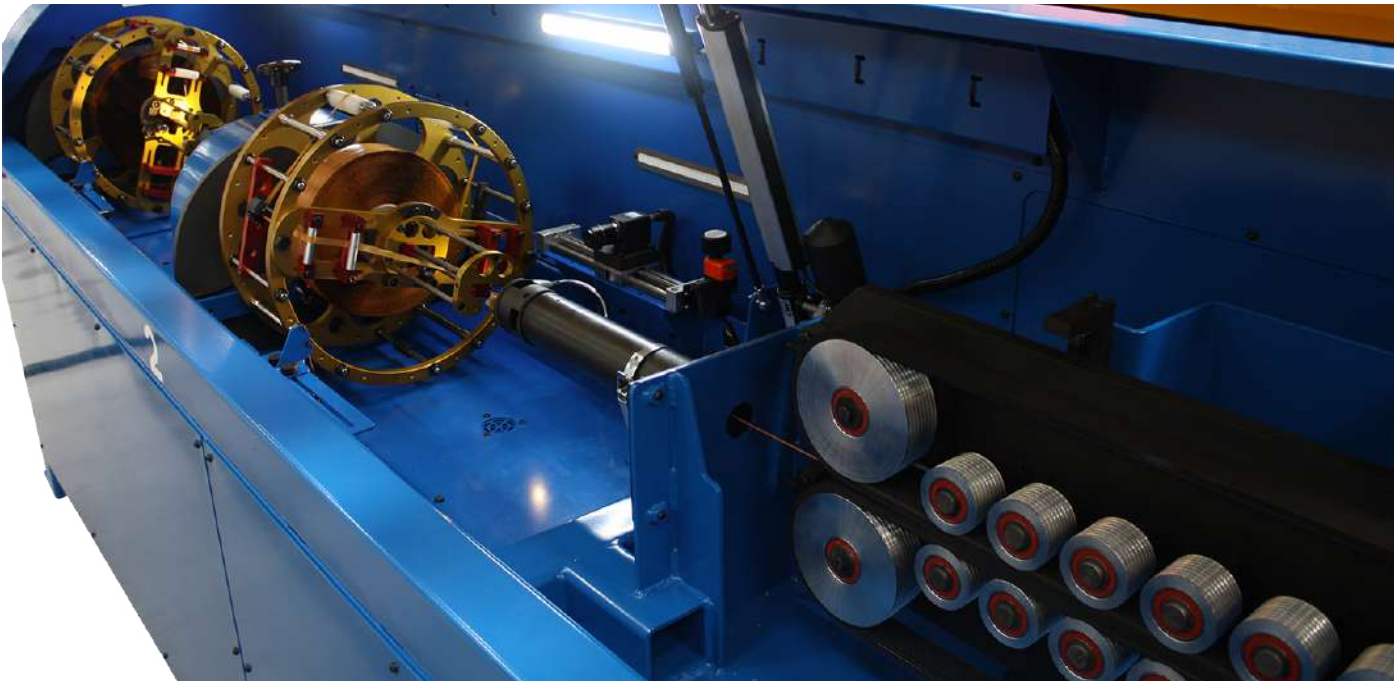


16 Pad Radial head designed to apply multiple conductors or tapes onto cables and formers

TAPING BAYS & STRUCTURES

Ridgway Machines offer a variety of taping bay designs to house different head styles and quantities. Taping machines can be offered as a complete line solution or incorporated into existing production lines.

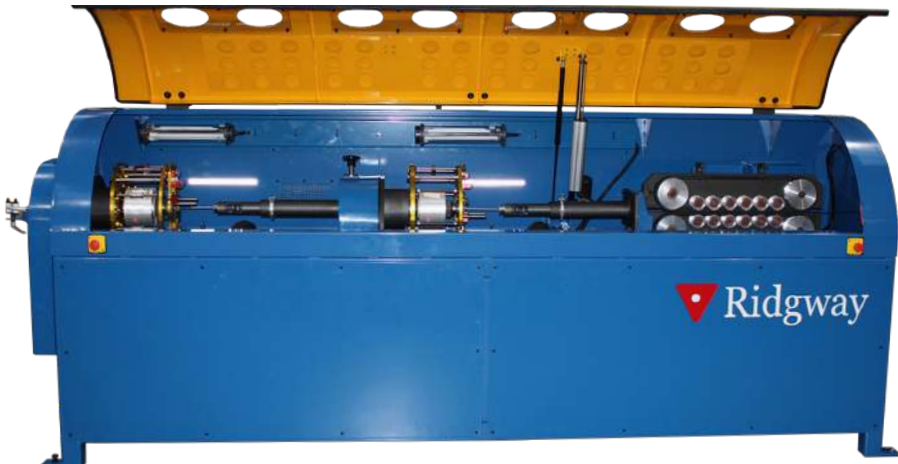
The compact bay series, accommodate the caterpillar unit within the taping bay. Single, double and triple head solutions are available. For larger heads, a standalone taping bay is utilised. Multiple bays can be incorporated into a single line.



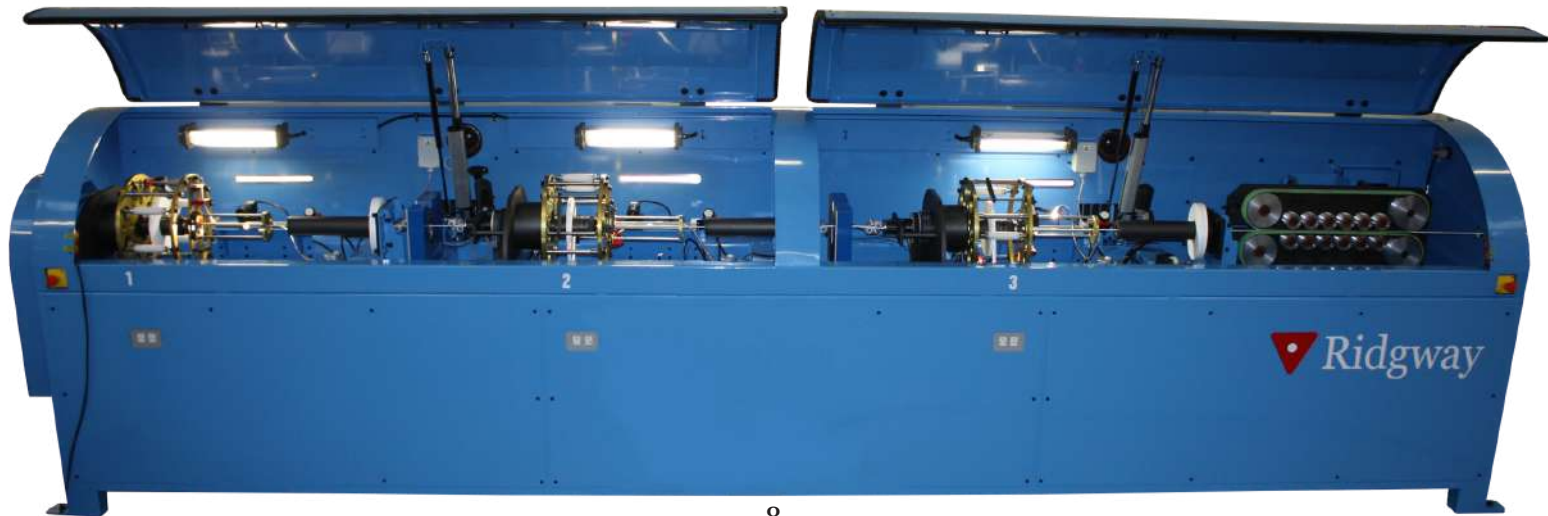
HTM-CSC - Single Head with CAT50



HTM-CDC - Double Head with CAT50



HTM-CTC - Triple Head with CAT50



All machines are supplied with control consoles and electrical systems incorporating PC / PLC controls and drive systems. Ridgway have worked with a number of different suppliers and can incorporate customers preferred manufacturers as required.

Key features:

- Easy to operate HMI control panel
- Efficient energy management
- Recipe based set-ups for applications
- Safety systems in-line with local and international regulations
- Remote diagnostics



2 Pad Tangential Bay



High Capacity Concentric Taping Machine



Vertical Taping Bay



4 Pad Tangential Taping Machine

DRUM STANDS

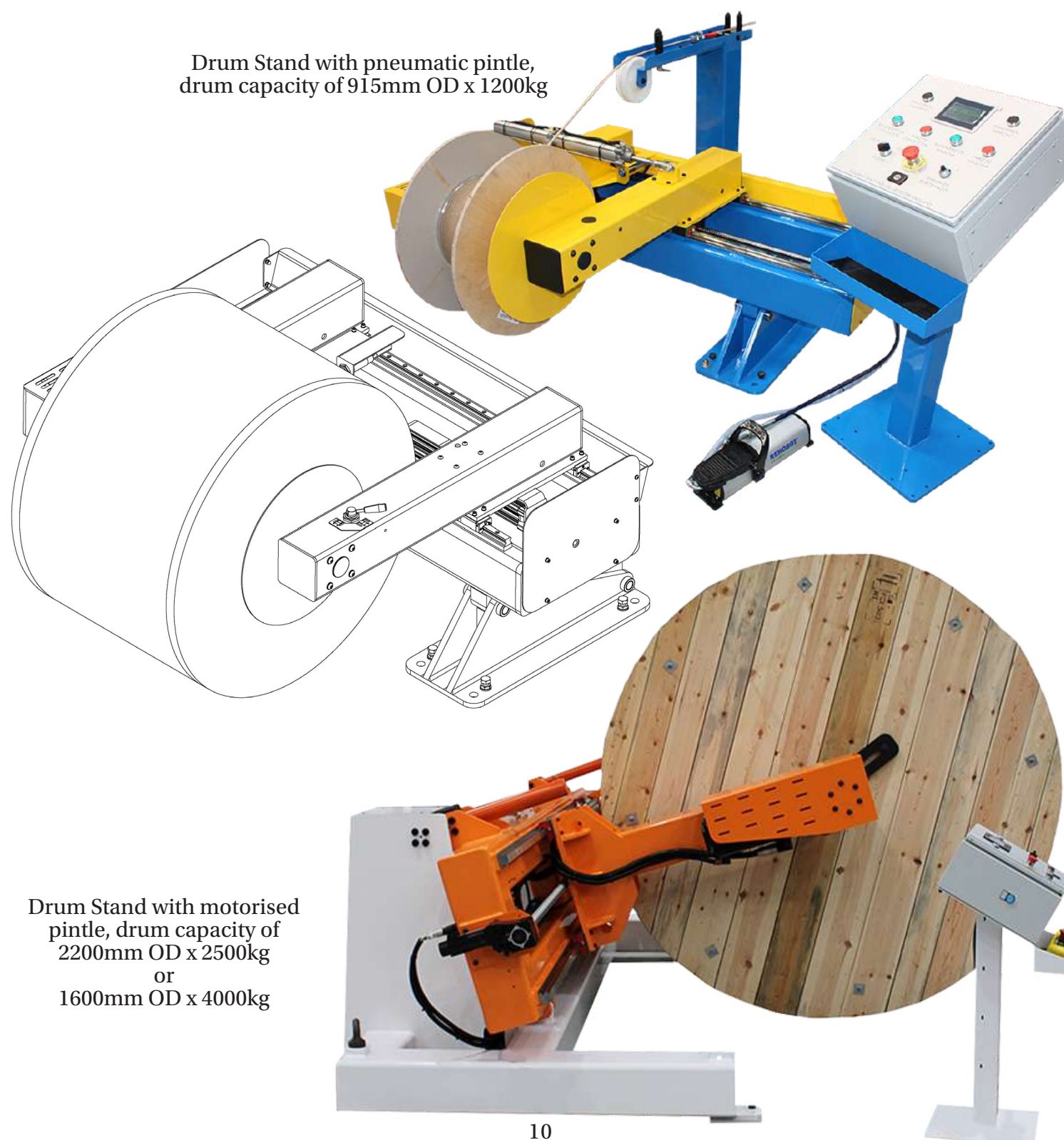
Ridgway design and manufacture a wide range of drum stands to accept a variety of drum diameters, widths and weights. From shafted solutions to pintle designs, the units can be tailored to suit specific customer requirements.

Mechanical and motorised braking systems are available with traversing wire and traversing drum designs.

Options can include:

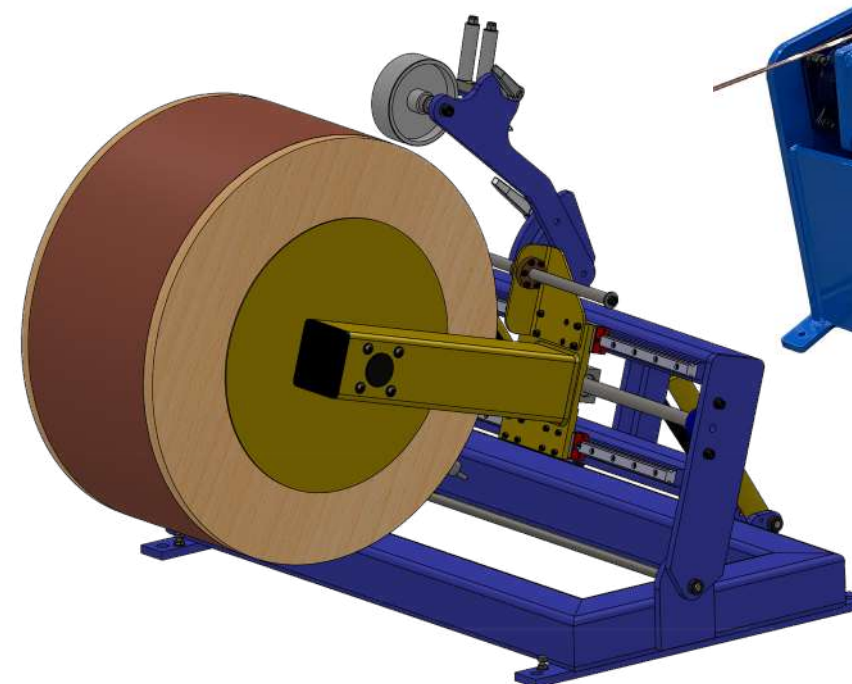
- ◻ Shafted / Pintle drum clamping designs
- ◻ Motorised / dancer (speed) tension control
- ◻ Traversing wire / drum solutions
- ◻ Hydraulic, pneumatic and motorised lift designs
- ◻ Single / multi drum units
- ◻ Wire break detection

Drum Stand with pneumatic pintle,
drum capacity of 915mm OD x 1200kg

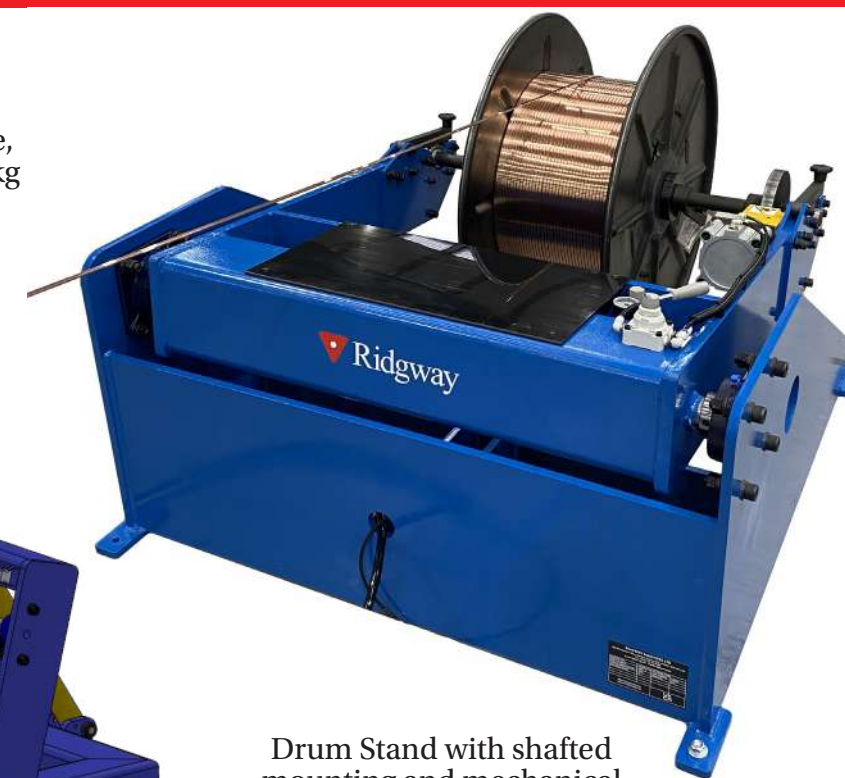


Drum Stand with motorised
pintle, drum capacity of
2200mm OD x 2500kg
or
1600mm OD x 4000kg

Drum Stand with mechanical pintle,
drum capacity of 762mm OD x 500kg



Drum Stand with shafted
mounting and mechanical
braking system. Drum capacity
of 1200mm OD x 2000kg



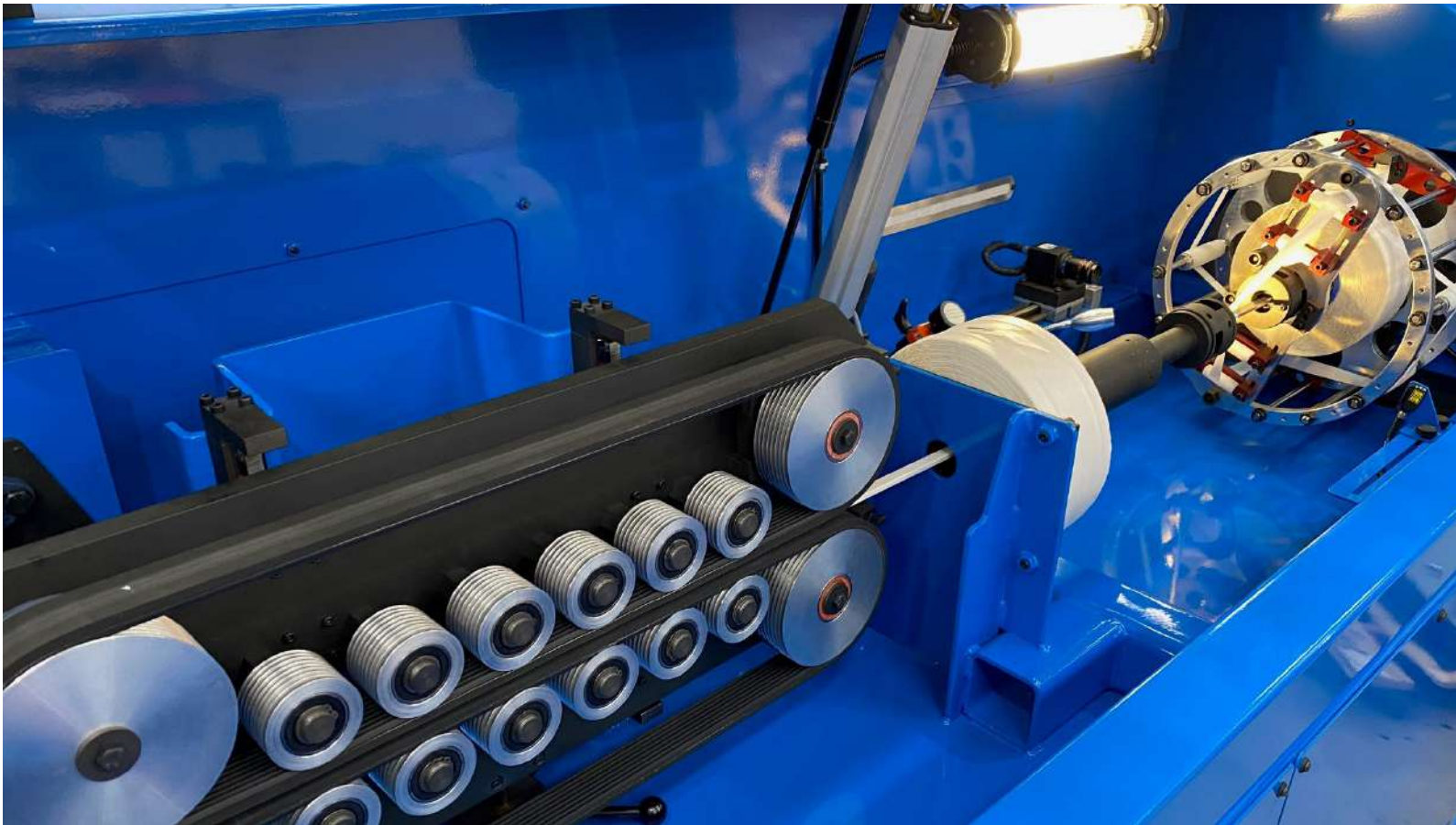
Vertical Drum Stand with pivoting arm,
drum capacity of 900mm OD x 1000kg



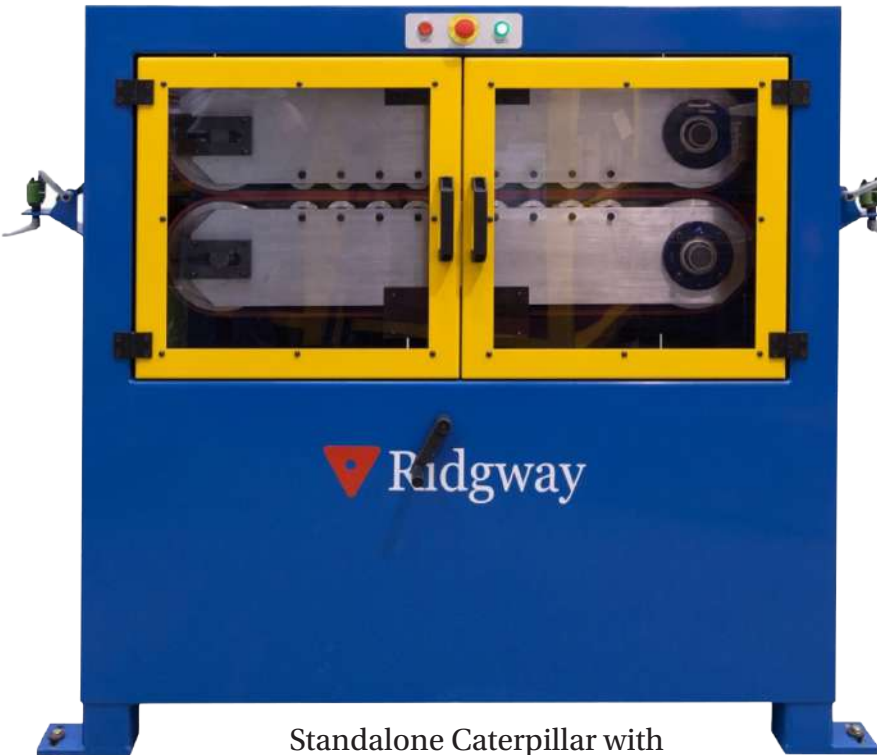
Dancer unit for tension control
with drum stand

Caterpillars and Capstans are designed to pull wires and cables through the taping machines at controlled speeds up to 65m/min. Synchronisation with the tape heads ensure a consistent, quality laying of the tapes.

A range of belt materials are available to suit the application.



Integrated CAT50 in HTM-CSC Taping Bay



Standalone Caterpillar with pull forces up to 500kg



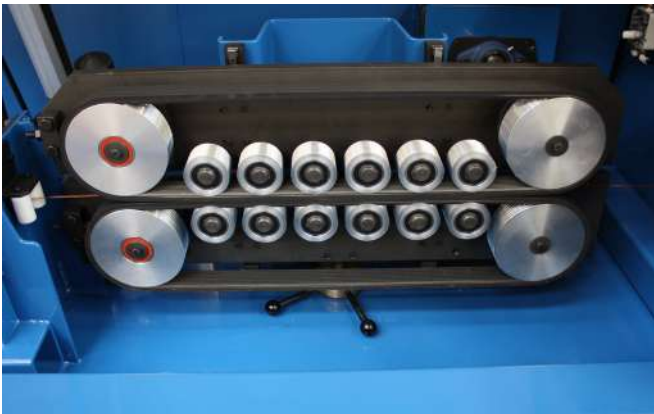
50kg pull force Capstan Unit with up to 3 wraps



30kg pull force Capstan Unit with up to 4 wraps



CAT50 Caterpillar 50kg pull force

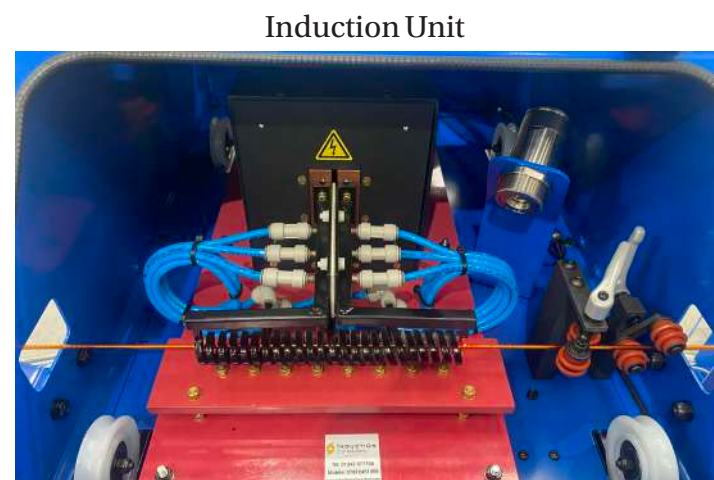


CAT50 Caterpillar integrated into Ridgway compact taping bay, 50kg pull force



Capstan Unit integrated on a take-up drum stand

Ridgway manufacture a variety of different ovens which vary in length and temperature. Single pass and multi pass options are available. Automated retractable elements are used to prevent burning of product when machine is stopped. Pyrometers are fitted to monitor the temperature as the product passes through the heating equipment.



Induction Unit can be incorporated into lines to aid with the adhesion between product and tapes



6M long Radiant Oven



Air Cooling Trough



Oven Mounted Nip Roller Unit



Free Standing Nip Roller Unit

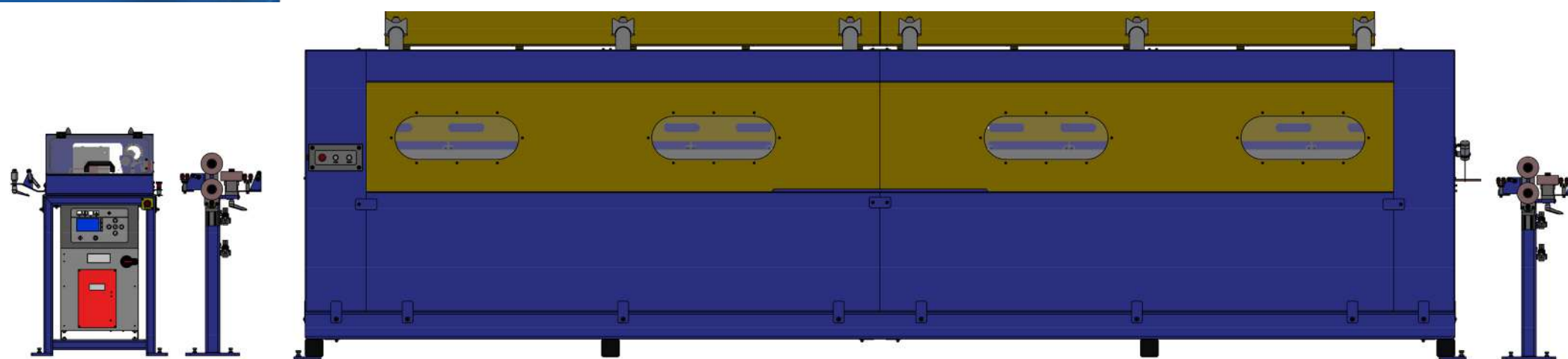
Nip Roller Units can be incorporated after the induction unit and oven to apply pressure to the coverings once heated to remove trapped air between the tape layers and the product.

Water and Air Cooling Units are designed to cool down the product following the heating processes.

The Water Cooling System incorporates a chiller to provide re-circulation of cold water.



Water Cooling Trough



Ridgway offer varnish solutions for different applications, ranging from simple roller applications to multi-pass with felt applicators.

Designs can include varnish heating systems, positional adjustments and retractable units for quick removal from the production line.



Single-Pass Varnish Unit



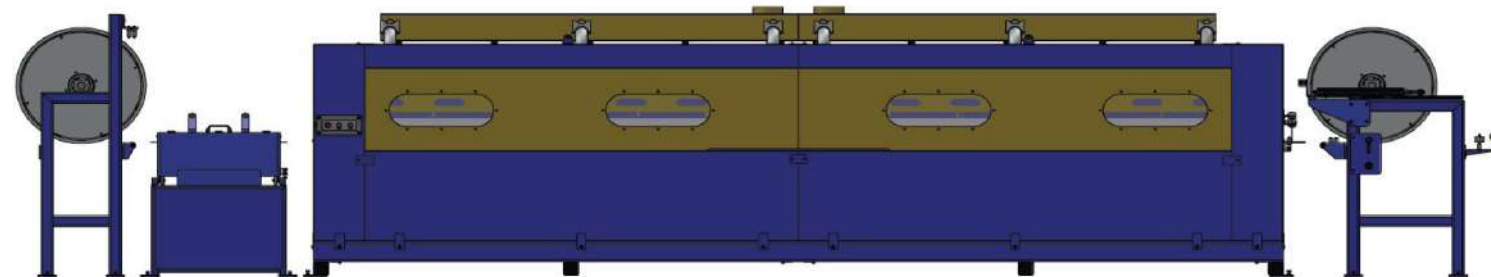
Mutli-Pass Varnish Unit



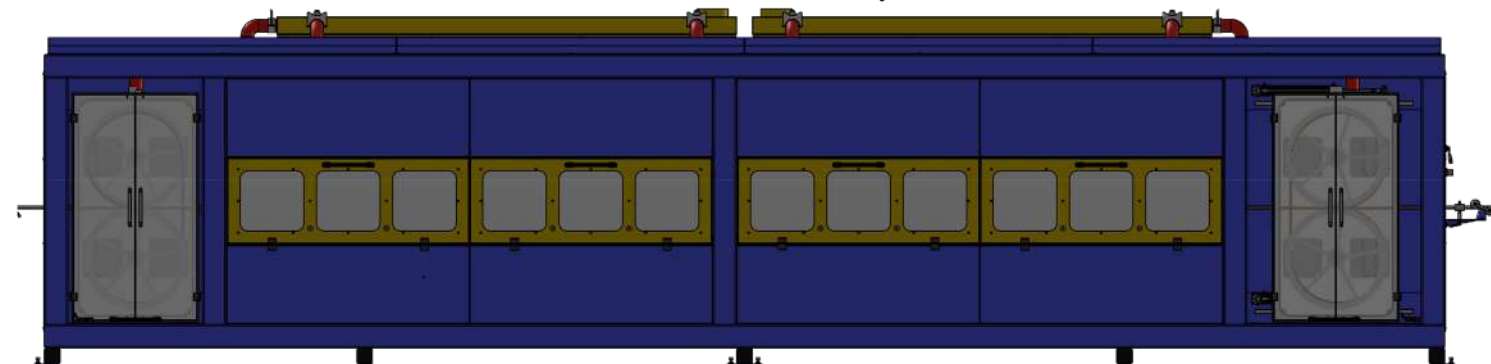
Re-circulation wheels allow for up to 3 passes through the varnish bath and radiant oven. This allows for additional build up of varnish.



Glass Re-Circulation Layout



PTFE Re-Circulation Layout



Quality control systems such as cameras, diameter sensors and spark testers can be incorporated into production lines to ensure the quality of the finished product.

Ridgway have worked with a number of different suppliers for quality control systems and can incorporate customers preferred equipment manufacturers as required.

Hi-Resolution cameras are integrated into the machine to provide high quality multi-point vision inspection, adjustment and image capture.

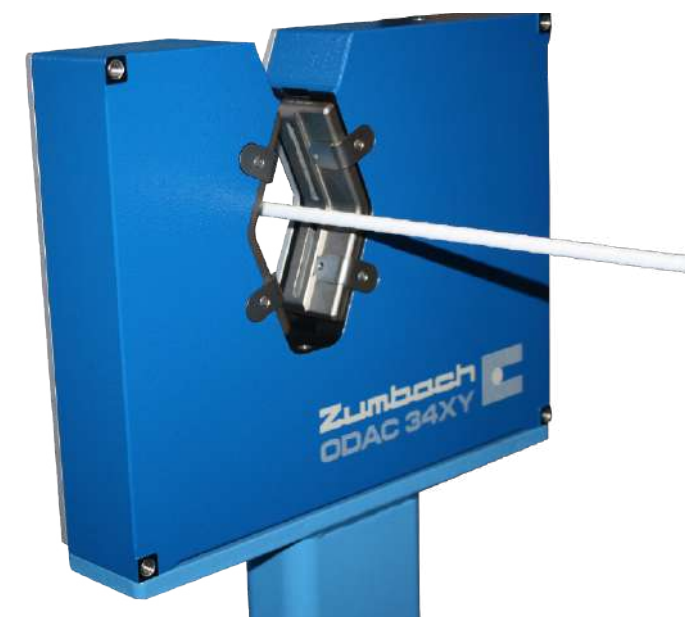
The camera system monitors tape elongation, overlap, registration and contamination. The system can create a full data log for reporting and quality control purposes.



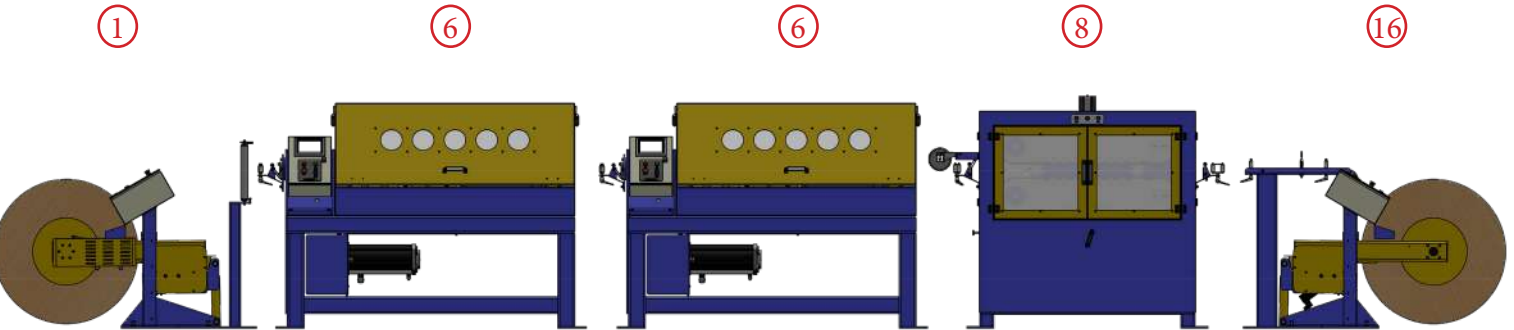
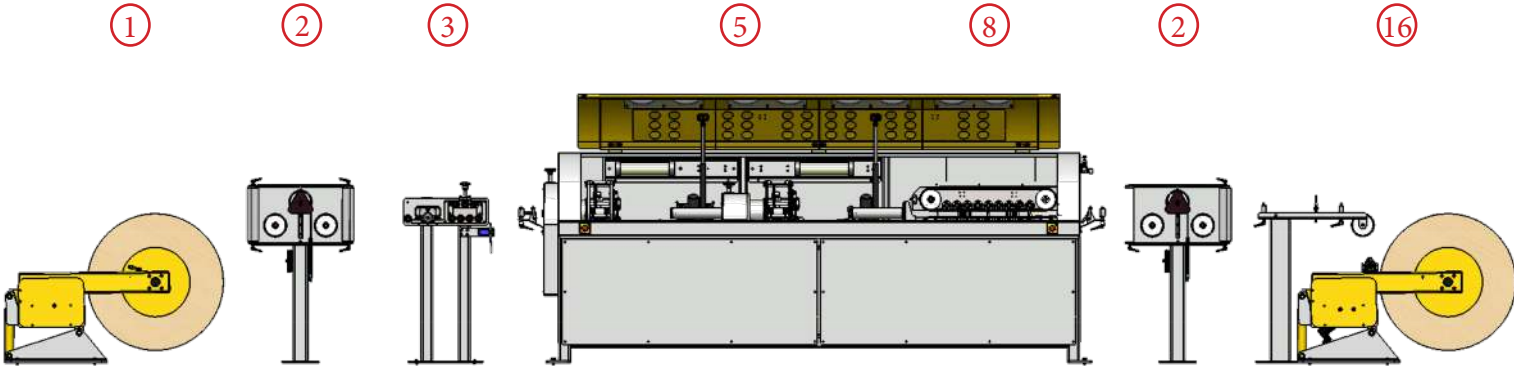
Displays showing live images from cameras with tape width and pitch measurements.

Spark Tester

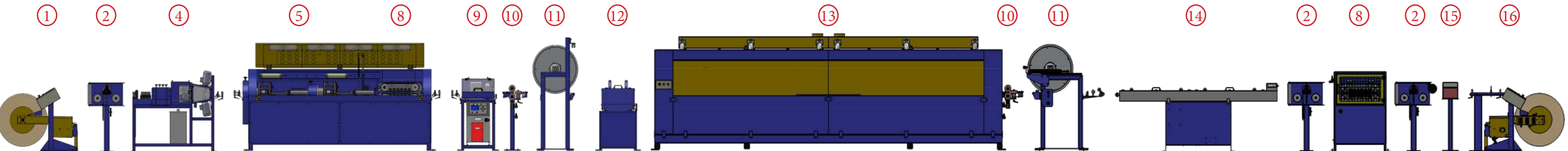
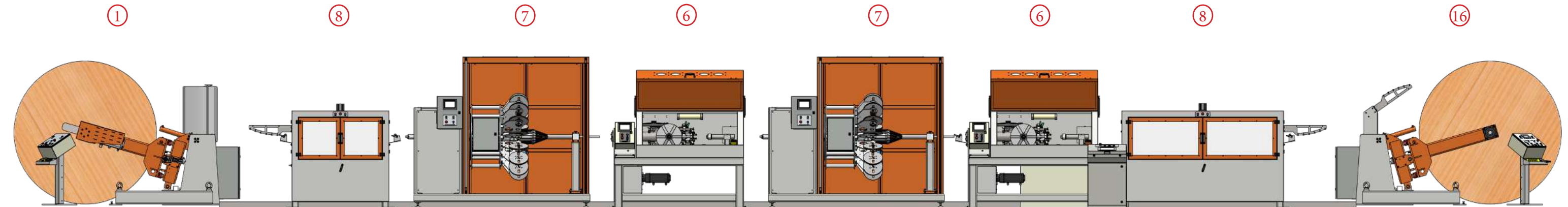
Diameter Sensors are used for product measurements. These can be positioned inside the bay after each taping head or freestanding for final product measurements.



Spark Testers are used for identifying insulation faults. An alarm output is connected to the main control system and brings the line to a controlled stop should a fault be detected.



- | | |
|-------------------------------------|-----------------------|
| ① Pay Off Drum Stand | ⑨ Induction Unit |
| ② Dancer | ⑩ Nip Roller Unit |
| ③ Straightening Unit | ⑪ Re-Circulation Unit |
| ④ Straighten & Clean Unit | ⑫ Varnish Unit |
| ⑤ Compact Concentric Taping Machine | ⑬ Radiant Oven |
| ⑥ 4 Pad Tangential Taping Machine | ⑭ Cooling Unit |
| ⑦ 16 Pad Radial Taping Machine | ⑮ Spark Tester |
| ⑧ Caterpillar | ⑯ Take Up Drum Stand |





Ridgway Machines



Other Solutions



Wire & Cable
Taping Machinery



Coil Taping
Machinery



Superconductor
Cable & Coil Machinery



Coil Manufacturing
Machinery



RTP & TCP Taping
Machinery



Iris Guides



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