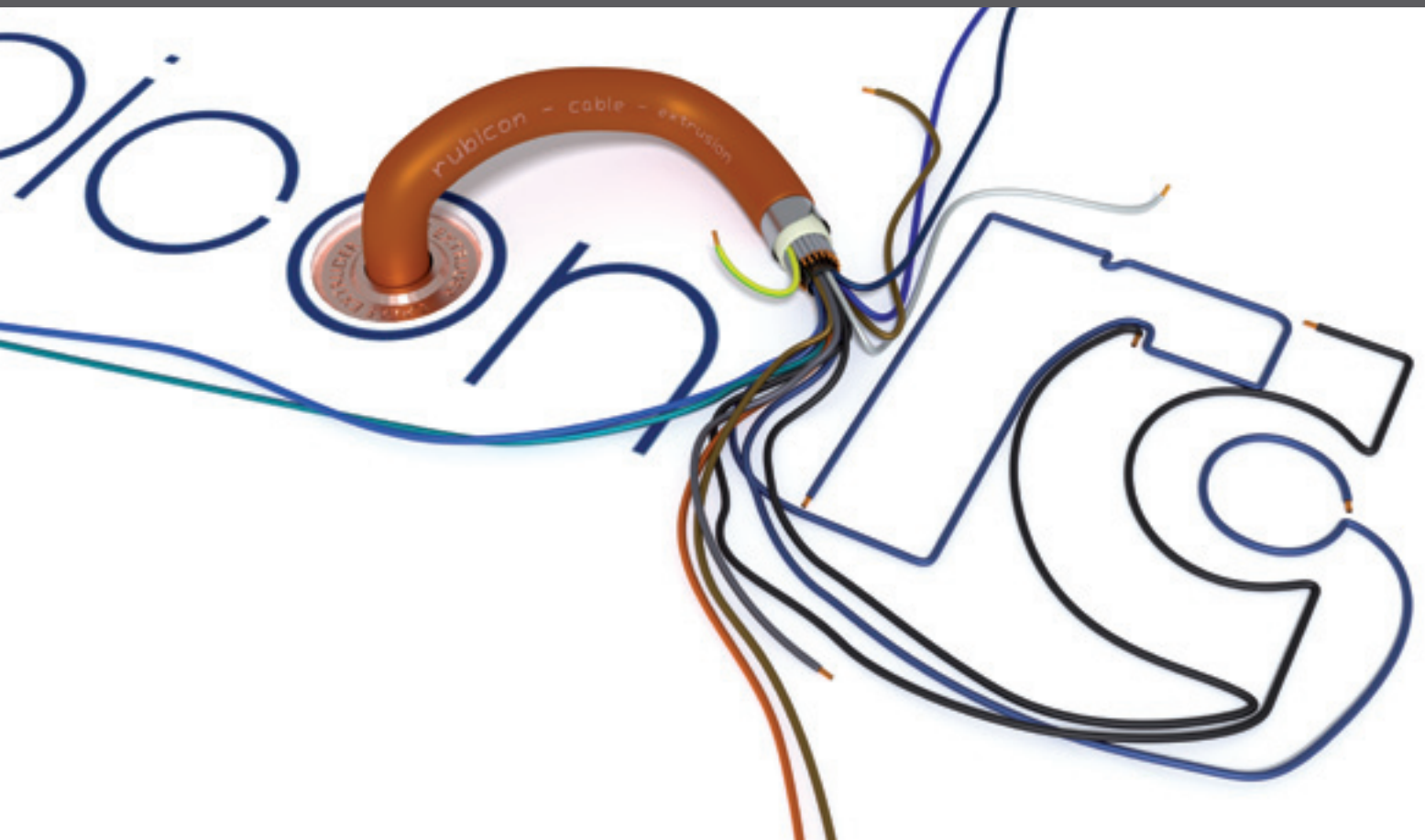


TAILOR-MADE
RUBBER EXTRUSION

Cable manufacturing lines



Cable manufacturing lines

Rubicon produces specially adapted machines and complete cable production lines for the manufacture of silicone-sheathed cables, wires and leads.

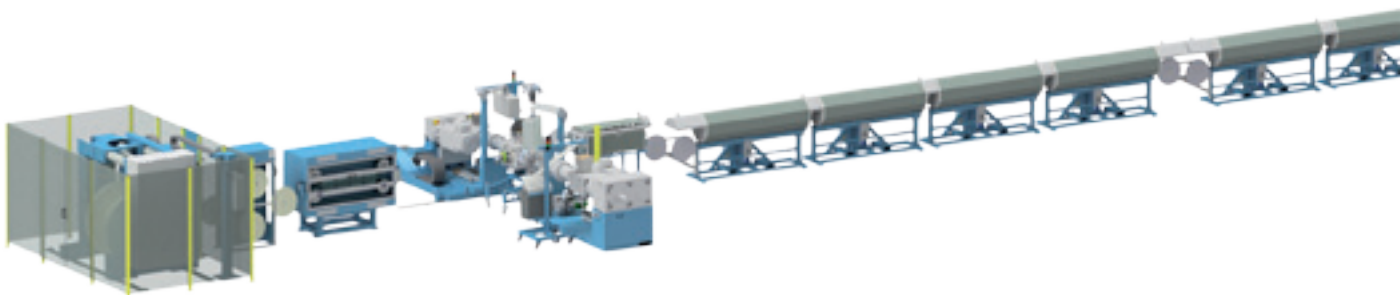
Drawing on our decades of experience in developing and manufacturing rubber and silicone extrusion lines we configure customized solutions to our customers' specifications and requirements. In selecting the size of the extruders, the lengths of the vulcanization lines and the required downstream equipment we pay particular attention both to the quality requirements of the product and to the spatial conditions at the customer's factory.

Our lines have been designed both for sheathing individual wires and multicore cables. Cables made of different materials and of different structures can be produced on one and the same line thanks to the flexibility of our lines which can switch easily between single and multilayer extrusion operations.

In additions to specifying the ideal machines we attach special importance to offering our customers complete solutions that are easy to operate. Drawing on our technological know-how we can optimise start-up procedures and minimize start-up rejects, enabling our lines to continue to operate efficiently even when producing small batches.

Line data

Line speed:	up to 400 m/min
Cable cross section:	0.5 to 300 mm ²
Wall thicknesses:	0.5 to 6.5 mm
External diameters:	2 to 40 mm



Extrusion

Vulcanization

Inspection

Turnkey

Applications

Thanks to its unique properties silicone rubber is used in the most diverse of industrial sectors.

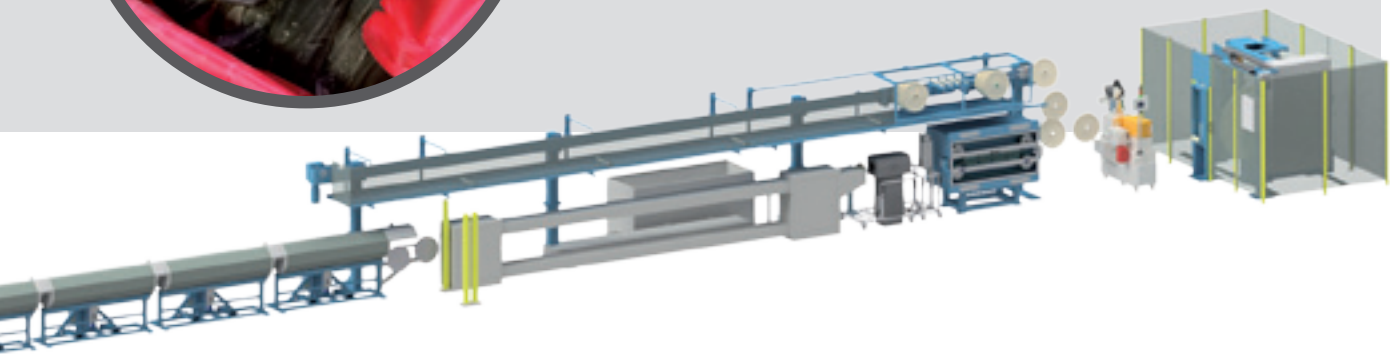
Our expertise in the field of silicone extrusion enables us to develop the appropriate extrusion system for manufacturing customer-specific products such as building installation cables, automotive wiring, safety cables, infrastructure cables, as well as cables for household products or medical devices.



Materials

The extrusion lines are suitable for processing peroxide and platinum cured silicones.

Both standard silicone compounds and special compounds, for example, ceramifying or anti-static silicones can be processed.



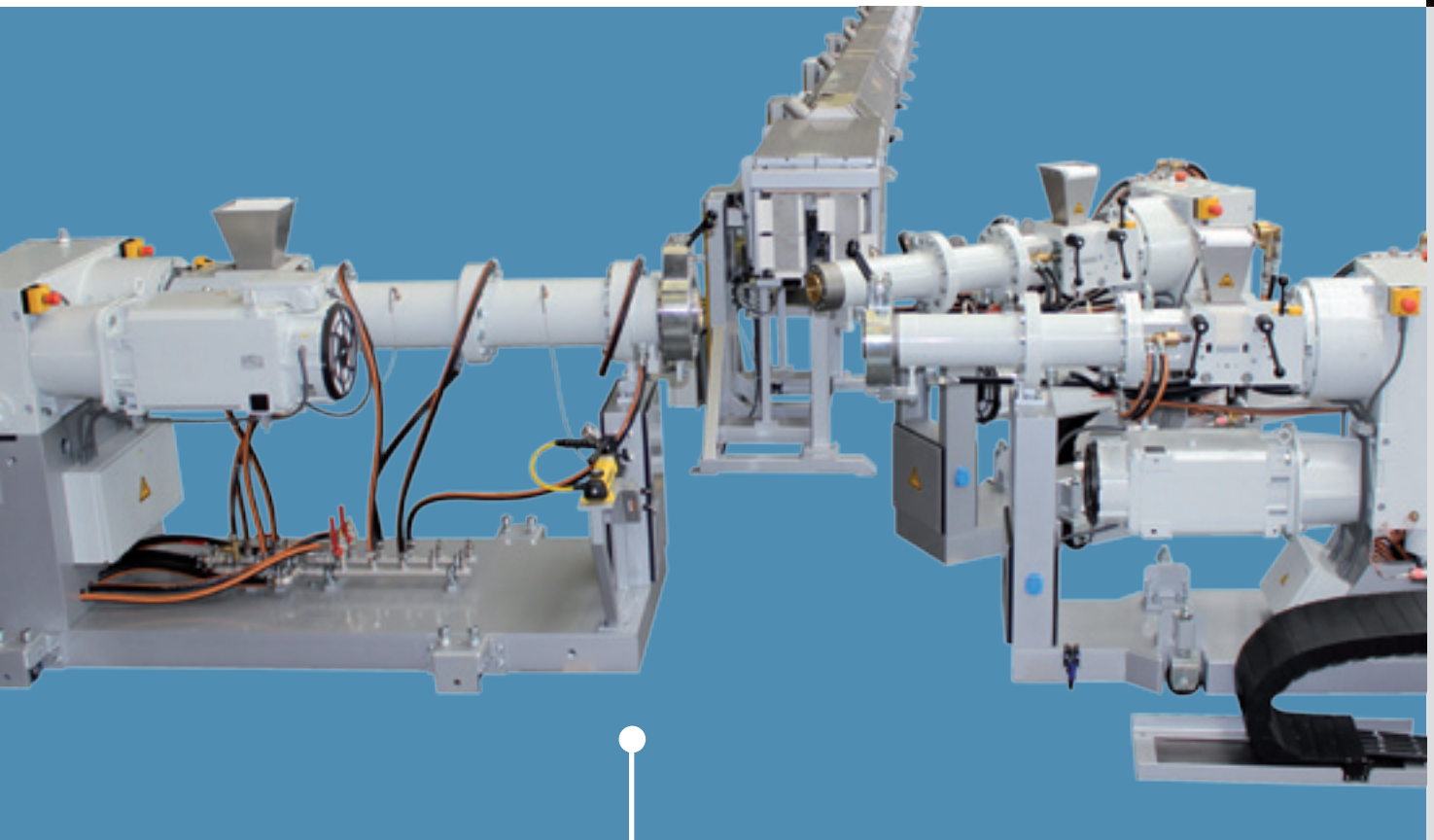
Cable manufacturing lines

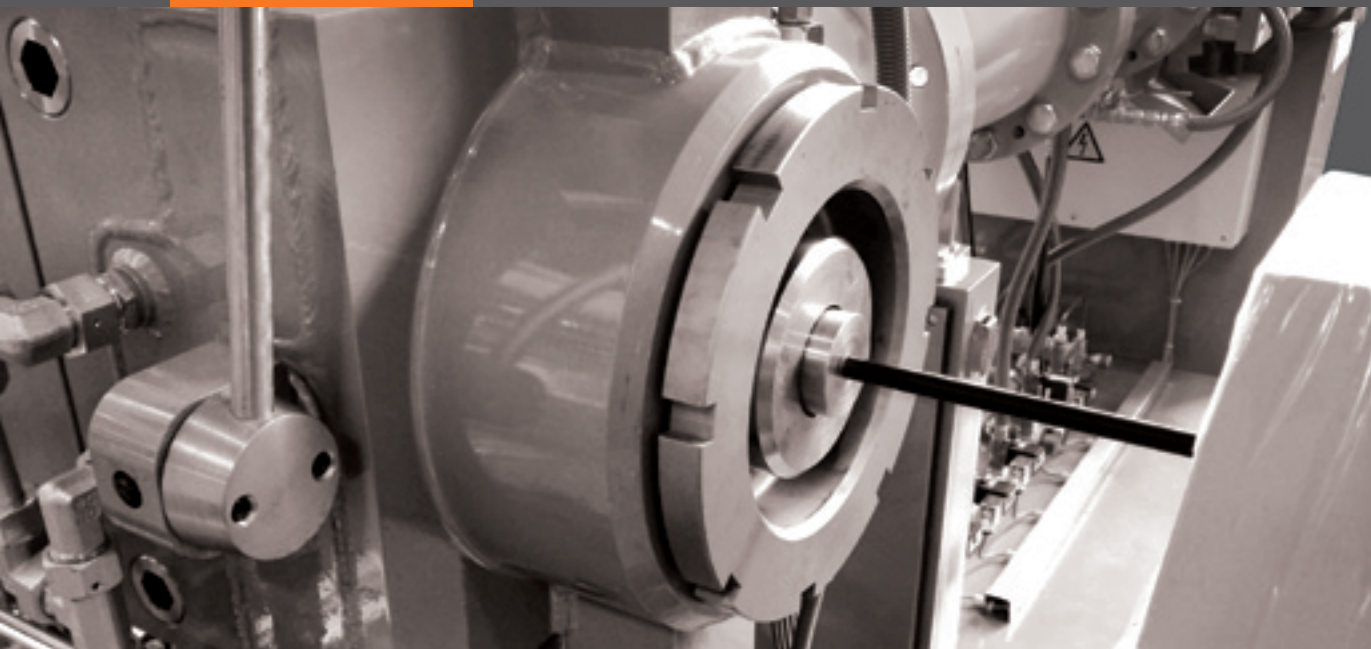
Extruders for cable sheathing

rubicon silicone extruders are perfectly adapted to the unique properties of silicone rubber thanks to their special screw and cylinder geometries and the design of the drive unit. Special armouring and coatings increase the service life of the machines.

Intensive and controlled water cooling enables dimensionally stable silicone products to be produced while at the same time maintaining high levels of productivity. The special design of the feeding section facilitates cleaning and reduces downtimes when changing materials, even if very soft and sticky compounds are being processed.

Where duplex or triplex systems are used, different layers can be extruded in one step or even colour strips can be inserted. The extruders can be set up in a number of different ways by means of shifting devices and swivel mechanisms, enabling the rubicon cable extrusion lines to be used for a wide range of applications.



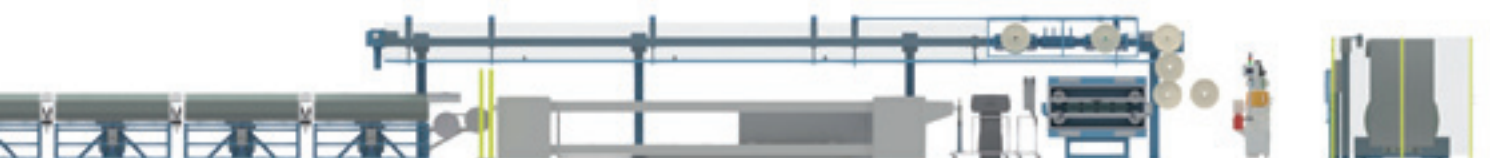
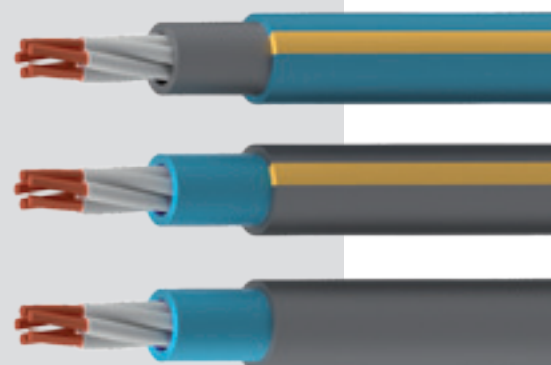


Extrusion heads

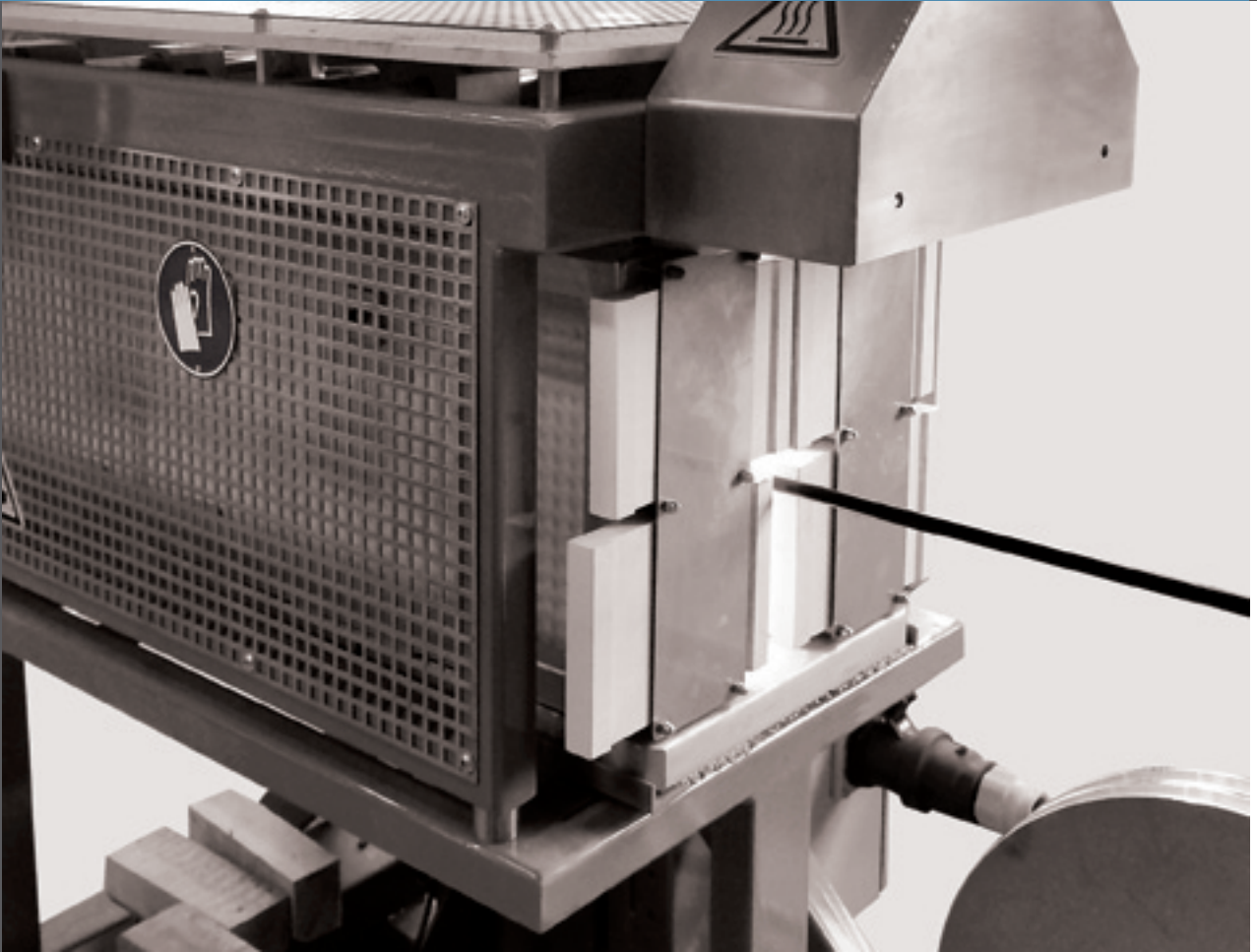
rubicon offers specially adapted cross extrusion heads for sheathing cables. Drawing on our decades of experience we can develop and manufacture head geometries perfectly matched to the product and material.

The cross heads are temperature-controlled by means of water. The special design of the guide cone as a short flow channel ensures an even flow of material and the innovative design enables extremely thin even layers to be applied.

Whether it be single or multilayer extrusion, or the insertion of strips - the rubicon cross extrusion heads are tailored to meet each customer's requirements for the manufacture of the most diverse products. Different sheathings can be produced with just one extrusion head simply by changing the guide cone, enabling the lines to carry out a wide range of applications.



Cable manufacturing lines



Shock tunnel

The shock or vulcanization tunnel can be used for a wide range of applications for the contact-free vulcanization of silicone cables.

The high energy infrared radiation penetrates and quickly vulcanizes the product because of internal heating, preventing marks by guide rollers in the downstream machines - the requirement for high quality products.



Infrared tunnel for silicone cables

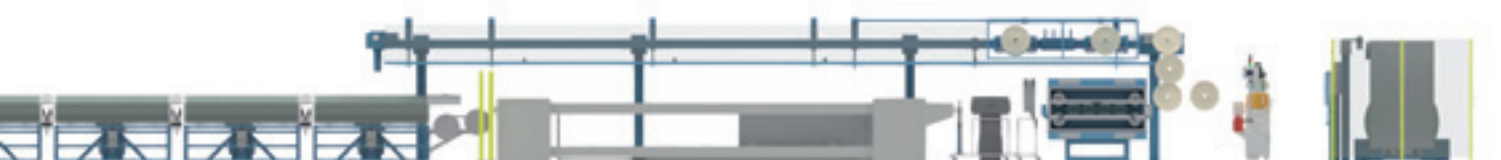
One of the most impressive features of the infrared tunnel for silicone cables is its compact design. This tunnel has a modular structure, enabling it to be flexibly combined with other components in line with the required rate of production. Multiple pass through of the cable minimizes the space required for vulcanization.

The reduction in energy consumption achieved by the optimum design of the emitter and high level thermal insulation ensures that the line operates efficiently and economically. The vulcanization line is ready for use in the minimum of time because of the short heating-up times.

Set-up times are minimized thanks to the ease of operation and accessibility of the infrared tunnel.



As an alternative to infrared vulcanization we can also offer pressureless salt bath vulcanization lines with efficient salt water recycling systems.



Cable manufacturing lines

Continuous quality control in the production process is a prerequisite for high quality products.

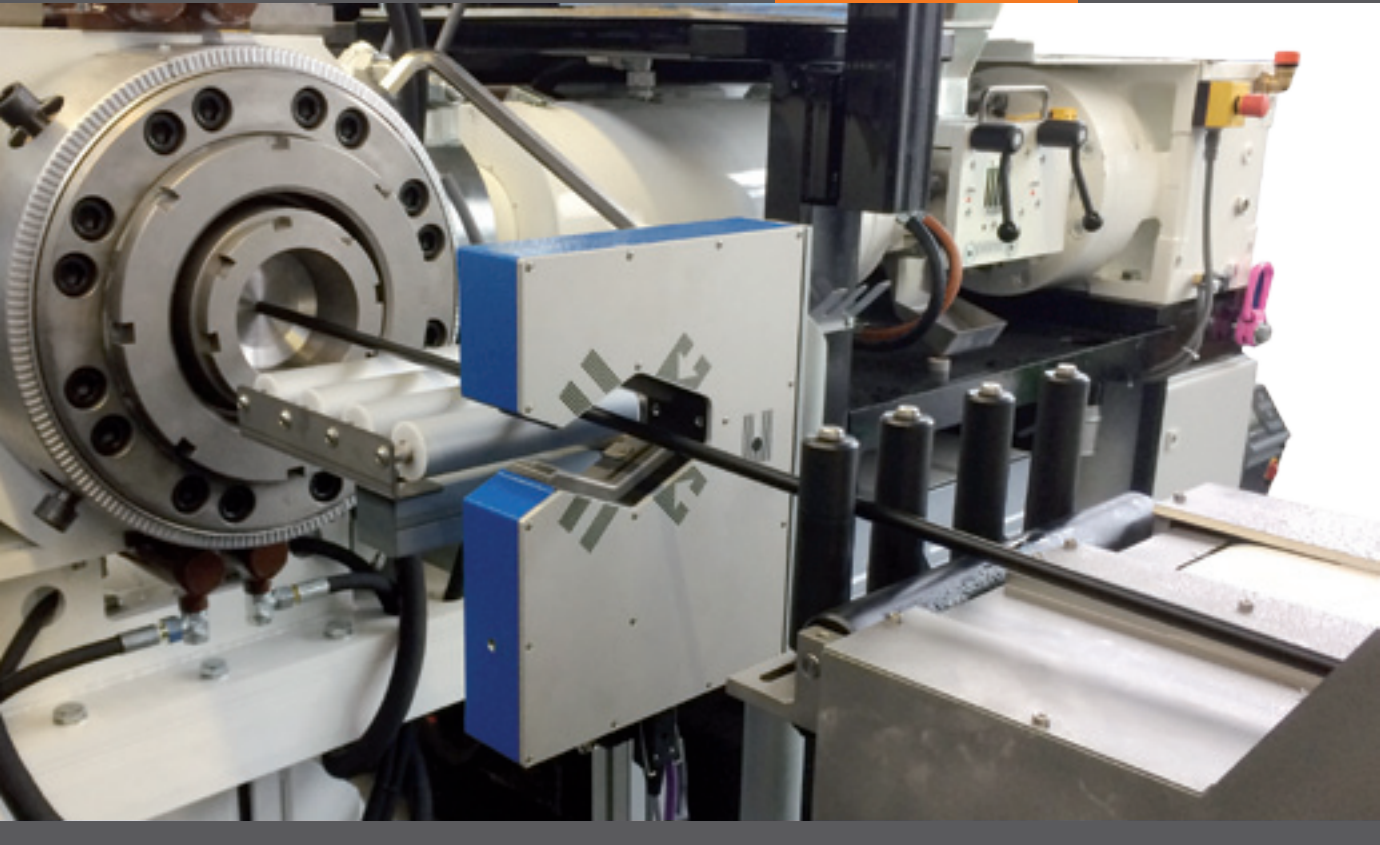
Diameters, wall thicknesses as well as concentricity and ovality are determined online using measuring systems that are perfectly matched to the product. The measurement data is processed immediately and the process values regulated in line with the target values.

Diameter control

The diameter is a key criterion in assessing the quality of the cable produced. Testing devices for checking diameters and wall thicknesses, which operate with an extremely high degree of precision and reliability, are used to monitor production.

The ovality and diameter of the product are measured before and after sheathing as well as after the product has cooled.



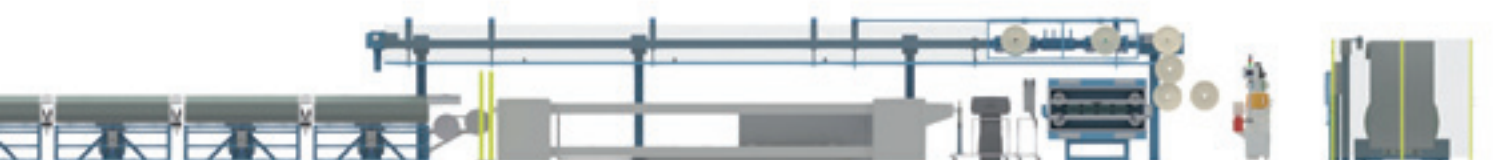


Length measurement

The length measurement systems used in the rubicon cable extrusion lines operate contactlessly. They ensure a high degree of accuracy without marking or damaging the product. Permanent calibration and low operating costs are guaranteed because no moving parts are used.

Spark tester

The high-voltage test equipment used enables any faults in the cable insulation to be reliably detected and documented without interrupting production.



Cable manufacturing lines

In addition to individual machines rubicon also supplies complete production lines for cables from one source. The lines are manufactured to meet the requirements and specifications of the customer and are equipped with the appropriate feeding and downstream equipment.

Additional equipment can be supplied for the production lines such as:



Unwinders and rewinders
with automatic recording of the winding diameter

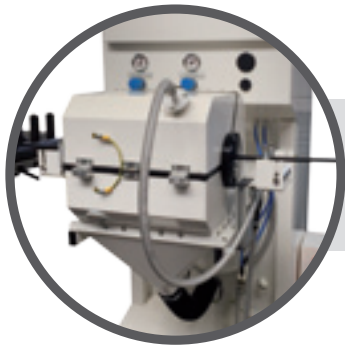
Control dancers
to regulate the tensile force to ensure the wires and cables are handled as gently as possible during the unwinding and winding process

Feeding units
for the continuous supply of feed strips to the extruder



Cooling lines
in a space-saving design for multi pass through of the cable

Talcum powder applying units
which take into account the line speed in calculating and adjusting the amount of powder required



Accumulators
as a horizontal or vertical unit dependent on space conditions with integrated dancer and content measuring

Dual disc capstans and caterpillars
as pushing and pulling unit



Printer
for cable marking





Line control

Our innovative automation solutions enable all parts of the line to be centrally controlled and monitored. The user-friendly process visualization provides a comprehensive overview of all process values and helps the system to respond quickly to any changes, thereby improving the quality of the products and minimizing reject rates.

The systems enable all line parameters and measurement results to be continuously recorded, ensuring the complete traceability of product quality.

Here too we fully meet our customers' requirements. Whether it be the integration of lines into the customer's network, order management, long-term data storage or line monitoring systems with network cameras - we can provide you with a solution tailored to meet your needs from one source!





rubicon Gummitechnik
und Maschinenbau GmbH
Hans-Dittmar-Straße 3
06118 Halle (Saale)
GERMANY

Phone +49 345 5 30 15 - 0
Fax +49 345 5 30 15 - 15
info@rubicon-halle.de

www.rubicon-halle.de