

## Twin-head coiling machines

Models 504 - Horizontal format

Our range of twin-head coilers are designed for the low tension coiling of plastic & rubber tube, hose, pipe & profile.

### The main benefits to the user are:

- Low tension coiling removes possibility of stretching or distorting the product being coiled.
- Compact format for small foot-print - saves space in the cleanroom.
- Lenze AC servo motor traverse for perfect layering control.
- Wide range of quick change mandrels/coiling heads.
- Easy-to-use controls via colour 178 mm (7") touch-screen operator panel.
- New technology reduces maintenance downtime.
- Medical paint finish available.

### Mode of Operation:

#### Semi-automatic servo coiling technology

The twin coiling heads are fitted with either stub shafts to accept customer's own reels or collapsible coiling assemblies. Adjustable layering arms are provided to guide the product onto the coil.

A fully automatic servo traverse mechanism is used to ensure side-by-side layering from start to finish. The traverse is easily set to suit tube & profile diameters from 1 to 50 mm.

An AC brushless servo motor & ball-screw drive system is used to adjust the traverse layering head. Individual coiling speeds & traverse profiles can be saved & stored in the integral PLC unit.

An auto-stop facility option stops each coil when the correct length is wound on. Twin length counters can be supplied as an option to make it possible to set the length required individually for each head.

The maximum coiling speed is set via the touch-screen. The coiling tension & exact matching to linespeed is achieved by a light-weight, fully balanced, dancing arm assembly. An ultrasonic sonar device is available as an option to replace the dancer arm.

All operator controls are located in an accessible control pod. A 178 mm (7") full colour touch-screen panel is provided. This allows full control over all the coiler setting & operations.

The vertical coiler is available in two versions:

- **Model 504/2H-S:** Standard machine.
- **Model 504/2HD-S:** Heavy-duty version.

Vertical coiler range:				
Model	Coil outer diameter (mm)	Coil width (mm)	Coil weight (Kg) - max*	Linespeed (m/min) - maximum**
504/2H-S	250 - 600	100 - 300	100	150
504/2HD-S	250 - 1000	100 - 400	100	100

\* We do not recommend coil weights exceeding 100 Kg.

\*\* Maximum speed refers to the maximum catch-up speed required between coil change-overs. The actual average linespeed will be slower than this.



# Model 504 coiling machines

## Semi-automatic coiling machine operation:

Our coiling machines are semi-automatic, not fully automatic.

Automatic operations include speed & tension control, length measuring & layering of the product onto the coil or spool.

A number of functions need to be carried out manually by the operator. These include installing a new reel or spool, threading-up the machine, changing over from a full coil to an empty coil, strapping & cutting the extrusion to length once the full coil has been reached.

If in any doubt about which type of coiler you require, please contact our Sales Team using the contact details below.

## Standard specification:

<b>Mechanical Specification:</b>	<ul style="list-style-type: none"> <li>1000 mm ± 50 mm line height. Alternatives available.</li> <li>Right-to-left product feed. Left-to-right available.</li> <li>Robust fabricated steel base fitted with 75 mm diameter plastic swivel castors and plated steel floor locks/pad feet.</li> <li>Easily removable panels for fast maintenance access.</li> <li>Base painted semi-gloss RAL 7035 light grey.</li> <li>Integral electrical cabinet painted semi-gloss RAL 7035 light grey.</li> </ul>
<b>Safety guarding:</b>	<ul style="list-style-type: none"> <li>Internal safety relay with reset illuminated button.</li> <li>Emergency stop push button on inlet side.</li> <li>Guards painted RAL 2004 bright orange.</li> <li>In compliance with EN ISO Standards.</li> <li>Fitted with a CE plate and provided with a Certificate of Conformity or Certificate of Incorporation<sup>2</sup>.</li> </ul>
<b>Operator controls and indicator lamps:</b>	<ul style="list-style-type: none"> <li>Colour 178 mm (7") Lenze TFT touch-screen control panel displaying coil length &amp; speed.</li> <li>800 x 480 pixel resolution. 210 mm x 155 mm panel size. AMD Cortex A8 chip running at 800 MHz.</li> <li>Windows Embedded Compact 7 software.</li> <li>SD storage card (512MB) for program back-up.</li> <li>Power connected indicator lamp (white).</li> <li>Safety circuit okay indicator lamp (blue).</li> <li>Coiler motor on/off push buttons with orange indicator lamp.</li> </ul>
<b>Guide-in system:</b>	<ul style="list-style-type: none"> <li>Fully adjustable layering arms; one per coil head.</li> <li>Encoder measuring wheel.</li> </ul>
<b>Traverse system:</b>	<ul style="list-style-type: none"> <li>Ball-screw driven by Lenze brushless AC motor with associated Lenze high-level AC servo drive.</li> <li>Easily adjustable traverse pitch via touch-screen.</li> </ul>
<b>Coil head motors:</b>	<ul style="list-style-type: none"> <li>Lenze AC motors driving the coil heads through right angle worm gearboxes.</li> <li>Lenze AC drives to match.</li> </ul>
<b>Documents:</b>	<ul style="list-style-type: none"> <li>Operating manual and wiring diagrams.</li> </ul>
<b>Power requirement:</b>	<ul style="list-style-type: none"> <li>400V three phase 50 Hz supply with earth. Alternatives available. Low voltage (24VDC) controls.</li> </ul>
<b>After-sales support:</b>	<ul style="list-style-type: none"> <li>One year parts warranty with express delivery during warranty period. Consumables excluded.</li> <li>Life-time telephone &amp; email support.</li> </ul>

<sup>1</sup> Specifications subject to change without notice. Please consult the factory for details of any changes.  
<sup>2</sup> Which Certificate will depend upon the exact configuration of the machine and the way it is installed.

## Coil head options:

<b>Standard mandrel &amp; options:</b>	<ul style="list-style-type: none"> <li>The coiler comes with a fixed rear mandrels fitted with a smooth shafts of 25 mm outer diameter. Included is an eccentric locking nut per coil head</li> <li>Alternative sizes of mandrel &amp; shaft are available.</li> <li>Collapsible hub mandrels are offered.</li> <li>Please supply samples or drawings of your coil type.</li> <li>For safety coils of over 100 Kg. are not recommended.</li> </ul>
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## Popular optional items:

<b>SCM-1:</b>	<ul style="list-style-type: none"> <li>Coil approaching completion warning.</li> <li>Blue flashing beacon.</li> <li>Adjustable via touch-screen panel.</li> </ul>
<b>SCM-2:</b>	<ul style="list-style-type: none"> <li>Coil approaching completion warning.</li> <li>Audible alarm (buzzer).</li> <li>Adjustable via touch-screen.</li> </ul>
<b>SCM-11:</b>	<ul style="list-style-type: none"> <li>Coil approaching completion warning.</li> <li>Combined flashing blue beacon &amp; audible alarm.</li> <li>Adjustable via touch-screen.</li> </ul>
<b>SCM-8:</b>	<ul style="list-style-type: none"> <li>Fully enclosing safety guard fitted with coded magnetic door interlock.</li> <li>Guard only fitted to high-speed machines.</li> <li>Light-beam safety system available as alternative.</li> <li>Please consult the factory for more details.</li> </ul>
<b>SCM-3:</b>	<ul style="list-style-type: none"> <li>Coil complete warning.</li> <li>Blue flashing beacon.</li> <li>Adjustable via touch-screen panel.</li> </ul>
<b>SCM-4:</b>	<ul style="list-style-type: none"> <li>Coil complete warning.</li> <li>Audible alarm (buzzer).</li> <li>Adjustable via touch-screen.</li> </ul>
<b>SCM-7:</b>	<ul style="list-style-type: none"> <li>Hours run indicator. Non-resettable counter.</li> <li>Useful for maintenance purposes..</li> </ul>
<b>SCM-9:</b>	<ul style="list-style-type: none"> <li>Light-weight sonar loop in-place of dancer arm.</li> <li>Complete with floor standing frame, guide bars, inlet &amp; outlet guide rollers &amp; light-weight loop roller.</li> <li>Recommended for small OD tube at high linespeeds.</li> </ul>
<b>SCM-12 Stainless steel floor tray:</b>	<ul style="list-style-type: none"> <li>Full stainless steel tray which covers the floor under the dancer or sonar loop.</li> <li>Designed to stop medical tubing touching the floor during the coil change-over period.</li> </ul>
<b>SCM-23 Stainless steel frame &amp; base:</b>	<ul style="list-style-type: none"> <li>Full stainless steel construction including base frame, fully enclosing guard &amp; belt assembly.</li> <li>Either painted or left unpainted with dull polished finish.</li> </ul>

Many more options are available. Please contact us for details.