



ROTAR 500 SERIES

AUTOMATIC
TAPING MACHINES

komax

ROTAR 500 SERIES

Whether you need wiring harnesses for a vehicle door, mirror or battery: The Rotar 500 Series taping machines are perfect for fabricating highly complex harnesses. The visualization of the process sequences makes production significantly easier. The free positioning of the linear system contributes to flexibility: Individual positions can be approached as and when required. It is also possible to equip the linear system with up to two clamps. This makes it possible to place connectors in an ideal position to each other – without any manual effort. The Rotar 500 Series also meets the highest safety requirements and reduces downtime.

Depending on the configuration, the rotar 500 machines are available with closed or open winding head.

OUTSTANDING FEATURES OF THE ROTAR 500 SERIES AT A GLANCE

Right-justified winding head

Open winding head

Extended winding head area

Smart process cover

Combination of 2 linear clamping arms

Covering of linear arm system

Processing of tape roles with an outside diameter of up to 220 mm

Reduced space requirement due to its compact design

Intuitive machine programming

Digital machine manual

Right-justified winding head

- No collision points.
- Cable blocking is prevented.
- Easier and faster wire harness handling.
- Ideal link into a production line.

Smart process cover

- The intelligent process cover meets the toughest safety standards.
- The process cover opens and closes fully automatically and also independently detects handling errors.
- The cable entry area can be adjusted to either 25 mm or 50 mm using different form gates.

Combination of 2 different clamping arms

- The machine is available with one or two clamps.
- It is possible to precisely position two or more cables/connectors relative to one another by integrating a second linear arm.
- Increased accuracy resulting from an automated process.
- Reduction in handling costs.

A NEW GENERATION OF TAPING

Large taping head area

- More space for handling the cable.
- Optimized handling time.

Open winding head

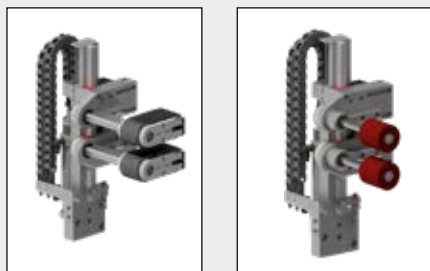
- Ideal for large cross-sections with long branches.
- The winding head opening facilitates insertion and removal of the cable harnesses.

Processing of tape rolls with an outside diameter of up to 220 mm

- Less machine downtime.
- Optimized setup time.

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**Automated and safe
processing of complex
wire harnesses.**

FEED SYSTEM



SOFTWARE



PROCESS COVER



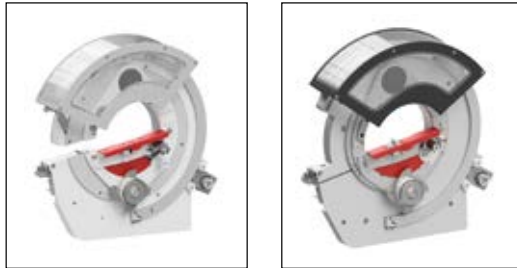
LINEAR SYSTEM



ONE MACHINE AS A PLATFORM

USING ONE BASIC MACHINE VERSION AS A PLATFORM, EIGHT STATE-OF-THE-ART MACHINE VERSIONS CAN BE CREATED WITH FEATURES THAT ARE CURRENTLY UNIQUE ANYWHERE IN THE WORLD

WINDING HEAD



MACHINE EXTENSION



MES & REMOTE

Outstanding process quality and repeatability

Automated taping with the Rotar 500 series results in up to 25% adhesive tape savings when compared to manual production. The robust feed system ensures low wear and thus a longer service life. The choice of feed, using either rolls or belts, ensures the ideal cable transport and optimal tape overlap for a wide range of cable qualities and thicknesses. This means a wide range of cable cross-sections can be processed.

Visualization and programming

The machine programming is intuitive, performed directly at the machine or on a remote workstation. It can be carried out using a table or with a graphic representation of the cable harness. A digital user manual appears directly on the panel, meaning that it is available at all times and facilitates rapid problem solving. In the event of faults during operation, problems and solutions are displayed automatically.

Applications at the customer's request

The Rotar 500 Series machines offer various configuration options that can be selected by the customer according to his product requirements. Komax Taping has a wide range of additional equipment options to meet specific customer requirements.

Machine length

The modular design principles used in the Rotar 500 series include two machine lengths, which support different travel distances and thus the optimum processing of the cable lengths in use. The short version has a travel distance of 500 mm, minimizing the space requirement in production. The long 1200 mm version means that longer cables can be taped under ideal conditions.

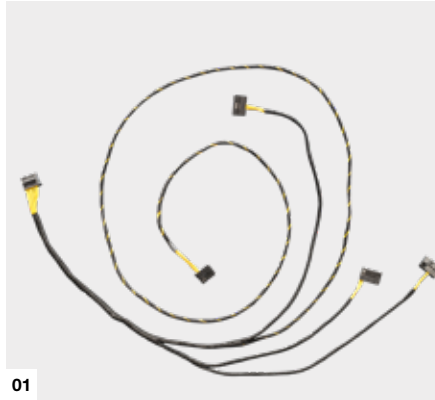


Processing of tape rolls with an outside diameter of 220 mm

One of the outstanding features of the Rotar 500 series is the increase in the maximum diameter of the tape roll to 220 mm. Up to now, the maximum tape roll diameters was 180 mm. The use of larger tape rolls reduces the number of tape changes required, with machine downtimes reduced by 45%. Where a tape length of 1000 mm has to be processed, a tape roll diameter of 220 mm requires just 7 tape changes, whereas conventional roll diameters of 180 mm require the tape to be changed as often as 13 times.

Linear system cover

Rotar 500 series machines can be ordered with or without a cover for the linear system. When combined with the process cover, all the moving components are enclosed. This significantly increases the machine's acceptability in production, whilst meeting the very highest safety standards. The cover opens and closes automatically.



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Intuitive machine programming

The Rotar 500 series allows the new ITA C machine software to be used. Using this software, the program sequence can be created based on a drawing of the cable harness structure, with the parameters being adjusted intuitively. The software automatically calculates the optimum process sequence.



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The ITA C is available in two versions:

- ITA C machine software is available for programming directly on the machine panel. A one-time payment gives unlimited access.
- The ITA C Desktop license is license-based software for creating the program on a desktop PC (e.g. in the production planning office).

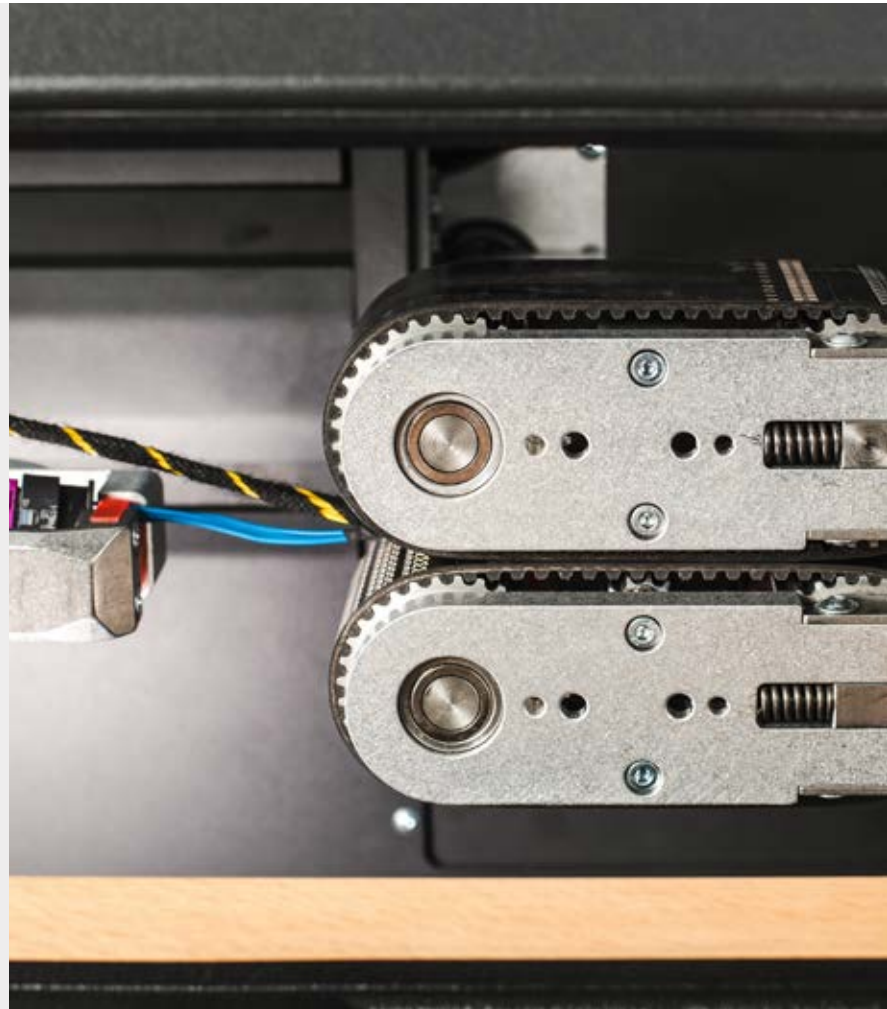


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- 01 Machine for the manufacture of complex cable harnesses
- 02 Step-by-step programming in table form
- 03 Programming via ITA C machine software by drawing the structure of the wiring harness

Roller feed or belt feed

Depending on the type and nature of the cables to be processed, the basic machine can be equipped with either a roller feed or a belt feed. The roller feed is characterized by its low-wear design and simple maintenance and scores with its long service life (life cycle). The belt feed is used for large cable packages consisting of several strands. It prevents slip and is gentle on the cables thanks to the elastic material used for the belt.



Ergonomic handling of harnesses

The open winding head enables the uncomplicated handling of long cable harnesses with large diameters. The branches can be inserted into the machine easily and ergonomically. Thanks to the special worktop design, the handling time is reduced to a minimum.





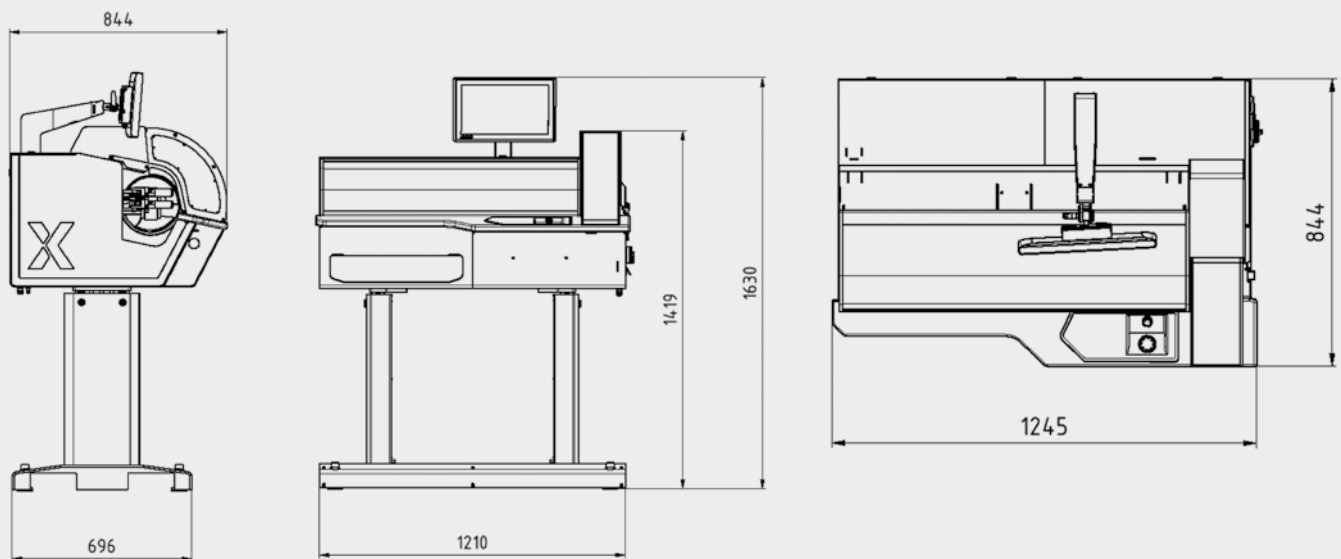


Applications at the customer's request

Komax offers a wide range of additional equipment options to meet specific customer requirements. At the request of the customer, many other applications are also possible with the Rotar 500 series.

MES-capable

The Rotar 500 series is ready for connection to an MES. We are happy to offer our support in creating the optimal connection.



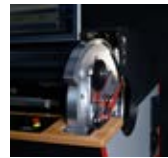
Technical Data – Rotar 500 Series

Application	Taping long cable harnesses with a large number of branches
Adhesive tape and cable harness data	
Cable harness diameter	2–35 mm
Max. winding length	50 mm to endless
Length deviation per winding step	Max. $\pm 2\%$
Adhesive tape materials	A wide range of automotive and industrial adhesive tapes (optional: double taping with non-adhesive aluminum tape)
Adhesive tape width	9–25 mm
Tape roll core diameter (standard)	1.5" und 3"
Maximum tape roll outer diameter	max. 220 mm
Machine data	
Winding head speed	closed head: 100–1,200 rpm open head: 100–1,000 rpm
Feed type	Combined linear and belt feed 1 or 2 linear arms
Feed	0–70 mm/turn, program-controlled
Length of the linear unit	500 mm or 1,200 mm
End-of-tape detection	by optical sensor
Electrical connection	3L/N/PE 380 – 480V AC/50-60Hz (optional: 3P/N/PE 380 – 480V AC/50-60Hz)
Back-up fuse	16 A
Power input	2,100 W
Control voltage	24 V DC
Operating pressure	6 bar (0,6 MPa / 87 psi)
Dimensions (H/L/W)	with closed head: 1,630 mm x 1,210 mm x 844 mm with open head: 1,630 mm x 1,730 mm x 1,006 mm
Weight	approximately 295 kg

YOU HAVE THE CHOICE

YOUR PERSONAL ROTAR – TAILORED TO YOUR REQUIREMENTS AND EASILY ADAPTABLE

Basic machine versions

	Installed	Must be selected	Can be selected
Rotar 515 (L)	   Closed winding head Feed rollers Single linear arm	 Clamp ring	 Linear cover
Rotar 520 (L)	   Closed winding head Feed rollers Dual linear arm		
Rotar 535 (L)	   Closed winding head Belt feeder Single linear arm		 MES
Rotar 540 (L)	   Closed winding head Belt feeder Dual linear arm		
Rotar 565 (L)	   Winding table	  single tape 9 mm single tape 19 mm	 Winding head lighting
Rotar 575 (L)	   Winding table	  single tape 25 mm double tape 2x19 mm	 ITA C machine software
Rotar 585 (L)	   Winding table		
Rotar 590 (L)	   Winding table		 Long wooden panel



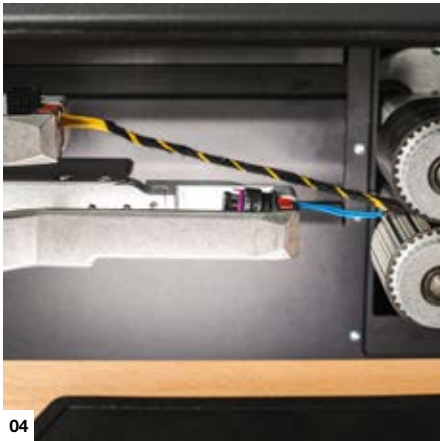
01



02



03



04



05



06

01
Right-justified winding head
02
Large handling area
03
Process cover

04
Cable positioning
05
Linear cover (optional)
06
Digital user manual



YOU HAVE THE CHOICE

YOUR PERSONAL ROTAR – TAILORED TO YOUR REQUIREMENTS AND EASILY ADAPTABLE



Inlets to the winding head

Two different form gates at the winding head can be selected, $\varnothing$ 25 mm or $\varnothing$ 50 mm. This allows the clearance around the incoming cable harness to be maintained as low as possible. This increases the acceptance of the machine by the operator and ensures greater safety.





Optimized cable guiding

The combination of open winding head and special guiding system facilitates cable guiding and handling.



Komax – leading the field now and in the future

As a pioneer and market leader in automated wire processing, Komax provides its customers with innovative solutions. Komax manufactures series and customer-specific machinery, catering to every degree of automation and customization. Its range of quality tools, test systems, and intelligent software and networking solutions complete the portfolio, and ensure safe, flexible, and efficient production.

Komax is a globally active Swiss company with highly qualified employees and development and production facilities on several continents. It provides local support to customers worldwide through its unique sales and service network and offers services that help them get the most out of their investments.