Wire Processing Machines

Comprehensive product range for flexible production
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Wire processing today has to meet tough quality standards. With production cycles becoming ever shorter, flexible production processes are an absolute must. Komax offers a comprehensive product range that assures an efficient wire processing at any time.

The overview of the various product lines and their accessories on the following pages includes everything from simple cutting and stripping machines (page 6 ff.) and fully automatic crimping machines (page 14 ff.) to standardized systems for the production of complete wire harnesses (page 20 ff.).

With the modular design of its products and their ease of operation, Komax offers solutions that ideally benefit you and your customers no matter what the situation.

“Our wire harnesses are becoming increasingly complex. With the systems from Komax, we can network the processes when we need to. These machines are high-performance models, yet easy to operate. That increases our productivity and gives us optimum value for the money. Thanks to automation, we guarantee consistent top quality at the highest level. Together with Komax, we continue building up a reputation as the world’s leading manufacturer of wires, cables and vehicle wiring systems.”

Franc Raner, member of the managing board of LEONI Bordnetz-Systeme GmbH & Co. KG, Nuremberg, Germany
Komax has put special effort into assuring quick and simple changeover. Standardized interfaces with the basic machine and uniform user interfaces guarantee ease of operation and excellent machine availability. The machines have a modular design to assure maximum flexibility. Measuring, cutting, stripping, crimping, tinning, twisting, insertion of seals, sleeves and housings, splicing and much more – the Komax product line leaves nothing to be desired.
Modular design and standardized mode of operation for optimum flexibility

With quality and efficiency requirements becoming ever tougher and component miniaturization ever more common, the industry is being pushed into automating an increasing number of processes. Komax offers a comprehensive range of wire processing machines to meet the demands of modern wire processing.

These machines can be combined with the broad range of accessories to create total solutions from a single source. All machines are highly flexible and quick to change over. Thanks to the standard networkable user software, you can also make full use of existing expertise.

Your benefits
- High productivity thanks to high-performance machines and short changeover times
- High flexibility
- Simple standardized mode of operation
- Integrated quality-monitoring units, excellent repeatability
- Good/bad handling with automatic post-production
- Networkable machines
Whether the wires you process are round or flat, single-core or multicore …

... the Komax cutting and stripping machines offer you a broad range of processes.

These devices are fitted with quick-release fastener and special memory functions for processing parameters so changeovers from one application to the next are quick and easy.

Performance, precision and user-friendliness are assured by the use of the most modern technology.
Cutting and stripping machines – precision and high performance

Today’s insulation materials make the toughest possible demands on the cutting and stripping of strands and wires. Performance, precision and user-friendliness are the crucial factors for success.

Komax machines incorporate the most modern technology, allowing them to be converted from one application to another quickly and easily. You can draw from a full range of integratable add-on modules to let your system grow right along with your requirements... for optimum flexibility and reliable process control!

Your benefits
- Broad range of processes, flexible in accommodating expansion
- Short changeover times
- Identical mode of operation, simple and clear
- Comprehensive range of accessories
- Proven high-quality components
- Reproducible quality

Complete systems from a single source.

with suitable feed units, dereelers, markers ...

... and orderly wire deposition.
From simple machines for cutting the widest variety of materials to high-performance automatic stripping machines for large wire cross-sections, Komax offers you a full range to choose from, complete with all the appropriate accessories. Preliminary and postprocessing of the wire is also a top priority.

Complex automatic stripping machines for processing multicore cables. In addition to the functions already mentioned, there are options available for processing the outer shield and the insulation of the inner conductors. The rate of feed is virtually unprecedented and offers huge advantages, especially with long cables. (Example in photo: Komax Kappa 235)

Attractively priced automatic cutting and stripping machines for single or special wires. These machines cover a huge range of wire cross-sections. Insulation can also be stripped in sections, allowing great stripping lengths. With their memory functions and quick-changing guide parts, these machines can be used efficiently for the production of series both large and small. (Example in photo: Komax Kappa 210)

Automatic cutting and stripping machines with an extensive range of equipment. To meet the tough demands on the market, various interfaces and options allow the integration of a variety of marking processes as well as the processing of flat ribbon cables and multicore round cables. (Example in photo: Komax Kappa 220)

Cutting of round and flat ribbon cables, PVC strips, various types of foils, paper, fabric and much more. The Komax cutting machines are real stand-outs when it comes to simple handling, enormous tensile force and a diverse range of accessories. Unbeatable performance for the price. (Example in photo: Komax 206)
Coilers for orderly wire deposit. The double-drum design in Komax coiler units makes wire coiling quick and easy. The devices assure gentle processing and are ideal for a wide range of applications. (Example in photo: Komax dps 272)

Automatic stripper for the flexible processing of round conductors and flat cables. This model utilizes intelligent new sensors that optimize process monitoring and help to speed up setup and changeovers. (Example in photo: Komax Kappa 330)

Powerful automatic stripper for large cross sections. With the basic machine, you can process round conductors with cross sections up to 120mm² and multi-core cables with outside diameters up to 35mm. (Example in photo: Komax dps 272)

Binding wire rings. The Komax binding units make an interesting addition to the coiling unit. With these devices, you can bind together cables and other goods with an elastic cord in a simple and gentle process while assuring maximum safety for the device operator. (Example in photo: Komax dps 261)
The Komax range of preliminary wire processing leaves nothing to be desired, covering everything from notching, slitting, and intermediate stripping to dereeling, marking and insulation testing.

Preliminary wire processing – fast and gentle

At Komax, the gentle, quick and high-quality preliminary processing of wire is a top priority. From intermediate strippers and dereelers of various capacities to the many different markers, Komax gives you a broad selection of integratable systems for adapting your wire processing machines to fit your own needs.
Your benefits
- Fully integrated devices
- Gentle wire handling
- High processing speeds
- Large application ranges
- Ease of operation, quick changeover
- Excellent performance for the price

Passive and active feeding systems. The wire is fed from loose coils, wire drums, reels, from Conipack or from central wire stores. Depending on the model involved, a control algorithm allows the processing machines to operate at top output while dereeling the wire bundles at a reduced acceleration rate and speed. (Example in photo: Komax 106)

Feeding systems for round and flat ribbon cables to match the Komax automatic cutting and stripping machines in use. Available as benchtop models for light coils and as a stand-alone version to accommodate coils weighing up to 100 kg: the new Komax dereelers process your wires at high and continuously adjustable speed. (Example in photo: Komax ads 115)

Feeding systems for heavy reels. Powerful drives and motorized reel clamping and lifting systems allow reels as heavy as 600 kg to be dereeled without difficulty. Other advantages include a wide variety of storage systems, high processing speeds and incredible acceleration rates. (Example in photo: Komax ads 123)

Fully integrated marking systems. From inkjet markers and hot-stamp markers to resistant marking with a UV curing system, the lineup of Komax markers is characterized by optimum integration into the basic machine, high processing speeds, and maximum process control. (Example in photo: Komax ims 291)
Semiautomatic machines – delivering 100 percent quality

Achieving top quality in wire processing is often a problem at manual work stations, especially when it comes to verifying and tracing the production parameters. That is why Komax puts such emphasis on reliability and process control in its robust semiautomatic models.

The same technologies are used as in the fully automatic versions to assure top processing quality.
Benchtop presses. You can set up the Komax benchtop presses in no time and they are so easy to use with the TopTouch user software. Integrated monitoring systems and traceable production data assure maximum quality. (Example in photo: Komax bt 722)

Stripping, seals insertion and crimping, all in a single device. These semiautomatic machines are designed for the reliable processing of twisted pairs and multicore wires. They are top performers in production. (Example in photo: Komax bt 752)

Twisters. These semiautomatic models are used for producing twisted pairs from preprocessed wires. They cover a broad range of cross-sections and lengths, making them an ideal solution for handling small and medium-sized batches. (Example in photo: Komax bt 188)

Your benefits
- 100 percent quality thanks to the use of the same technologies as in the fully automatic machines plus integrated monitoring modules
- Economical, even in the processing of small batches
- Easy to operate, short changeover times
- Greater output thanks to short cycle times
No matter what the process, from crimping and fluxing to tinning, seal and sleeve insertion or twisting, Komax fully automatic crimping machines offer a broad diversity of processes.

Swivelling...

...or linear transfer machines allow wires to be processed efficiently and economically.

The modular design of the systems assures maximum flexibility and efficiency.
Fully automatic crimping machines – wire processing for the toughest requirements

Today’s wire processing is characterized by small batch sizes and just-in-time production. Converting machines from one application to the next has to be quick and easy. The Komax fully automatic crimping machines are the perfect answer to meeting this need.

Incorporating the latest technologies, these machines are designed for processing single conductors, twisted pairs, and double-crimp connections. Their modular design and integrated quality monitoring units with good/bad handling assure maximum flexibility and process control. And the devices can be networked thanks to the use of modern, multilingual user software.
From compact machines with three types of processing and flexible fully automatic machines with six stations and double gripper units to variably expandable linear transfer systems, Komax offers a comprehensive selection of networkable fully automatic crimping machines.

Fully automatic crimping machines with open platform for great flexibility. These machines open up a variety of possible configurations featuring up to seven processing stations and an extensive range of accessories. Standard and customer-specific processes can be integrated. (example of a Komax Alpha 356)

Attractively priced fully automatic crimping machines with three processing stations. Depending on your needs, you can crimp both ends of the wire, execute double-crimp connections with three different terminals, insert seals on one end, tin or mark the wire with an inkjet marker. (Example in photo: Komax Gamma 333 PC)

Compact fully automatic crimping machines covering a large range of cross-sections. These machines perform crimping or twisting, fluxing and tinning of strands. You can process cross-sections ranging from 0.0123 mm²/AWG 36 to 2.5 mm²/AWG 14. (Example in photo: Komax Gamma 255)

Fully automatic crimping machines with four processing stations deliver great performance for the money. These machines are suitable for larger batch sizes. You can flexibly insert seals and crimp both ends of the wire. The integrated quality measuring devices allow you to check crimp height, wire length and pull-off force fully automatically. (Example in photo: Komax Alpha 355)
Fully automatic crimping machines with coiling and binding system for processing long cables at full speed in minimal space. These machines are designed for two-ended crimping and seal loading on long cables. With its ingenious coiling and binding system, this machine eliminates the need for long deposit units and can retain a small footprint. (Example of a Komax Alpha 358)

Fully automatic crimping machines for just-in-time production. These machines were specially designed for processing small batch sizes. They feature integratable quality measuring and minimum setup and changeover times even while production is underway. (Example in photo: Komax Alpha 455)

Fully automatic crimping machines expandable at will. These linear transfer machines were specially developed to handle small jobs and sequences. The machine design allows flexible expansion, offering you a virtually unlimited range of processing variations. When combined with the appropriate insertion robots, these machines create systems for the automatic production of entire wire harnesses and other special applications. (Example in photo: Komax Zeta 633)

Fully automatic twisting machines for processing twisted pairs. Continuously fed material is processed on these machines into finished twisted pairs. Six stations offer a great degree of flexibility, also for processing single conductors. (Example in photo: Komax Alpha 488)
Machine modules – for economical production

To achieve efficient, economical production, you need high-performance machinery that matches your requirements. Komax has developed just that for you, with its range of fully automatic crimping machines. The different standardized modules allow you to upgrade and expand your basic machines to meet your needs and your customers’ requirements. Thanks to the integrated monitoring systems, you can always comply with the requisite quality standards.

You can adapt your machines to meet your specific needs with modules for tinning and for processing crimp terminals, wire-end ferrules, male and female contacts, sleeves and seals.
Crimping presses. The Komax crimping presses assure a perfect connection between wire and terminal. These presses feature a high crimping force, continuously adjustable speed, integrated crimp force analysis and a double-stroke function. With all these capabilities, you can process most commercially available terminals. (Example in photo: Komax mci 712)

Programmable crimping presses. Besides the advantages already mentioned, you can program the crimp heights for these presses and control and approach these positions in each press cycle. (Example in photo: Komax mci 722)

Seals applicator. These seals modules have modular application sets and mechanical quick release fasteners. These features plus a compact design and excellent accessibility make these modules easy to change over to other seals variants. Seals monitoring is a standard function. (Example in photo: Komax mci 765)

Tinning module. These devices are ideal for lead-free tinning in a flow-tinning process. The pump speed can be adjusted continuously. This function, coupled with the precise temperature regulation, assures a high degree of tinning quality. (Example in photo: Komax ioc 785)

Your benefits
- Compact design and easy access
- Integrated quality monitoring units, high level of process control
- Short changeover times
- Simple and convenient machine operation
- Programmable crimp height
- Suitable for all-round applications
The new generation of insertion machines – a quantum leap in fully automatic wire harness production

Fully automatic block loading and wire harness production will become increasingly important in the future. After all, the full automation of these processes, complete with integrated quality monitoring, is the only way to assure maximum quality and efficiency.

Teamed up with the fully automatic Zeta 633 crimping machine, this new generation of block loaders can create flexible systems for the fully automatic production of wire harnesses covering the broadest range of complexity. This approach also addresses the industry trend towards ever smaller batches in production. The machine design allows different wire harnesses to be produced simultaneously and thus greatly reduces the cost per lead set. What's more, you can add new applications later on with no difficulty at all.
Fully automatic splicing machine for ultrasonic welded harnesses. These fully automatic machines assure economical production of butt and head-to-head splices. They also offer all the basic functions for seal and terminal insertion and are suitable for the processing of individual wires as well as sequences.

(Example in photo: Komax Zeta 633 SP)

Your benefits
- Single- and double-sided block loading – flexibly expandable
- Economical production of the widest variety of wire harnesses on a single machine – fast amortization of the investment
- Easy to retrofit for new applications
- No application-specific parts – changeover time < 1 minute
- Consistently high level of quality and process control
- Easy to operate

Flexible basic machine. The Zeta 633 fully automatic crimping machine can process over 300 different wire/terminal combinations without any changeover at all. With an extension, an additional four processing stations can be accommodated. Marking systems can also be integrated without difficulty. (Example in photo: Komax Zeta 633 with extension and Zeta 655 block loader)

Single- and double-sided block loading of simple connectors and small-pitch multipole housings. The machine design allows you to produce different wire harnesses simultaneously. Since there are no application-specific parts, there is no need for changeover. The housings are fed automatically, so even small production batches can be processed efficiently and economically. (Example in photo: Komax Zeta 655 block loader)
Range of accessories – assure top quality and efficiency

With the extensive range of accessories available from Komax, you can adapt your processing systems to meet your specific needs.

You have your choice of a wide range of integratable quality monitoring modules and networking solutions. Using these products, you can set up central data recording and control and monitor your systems in a coordinated fashion. The systems are operated from easy-to-use Windows® interfaces. The measured results are all saved, so the data can be retraced at any time.
Quality measuring devices.
In these devices, the focus is on controlling and increasing the level of quality. The full integration of the measuring processes in the production sequence reduces changeover times and eliminates input errors. (Example in photo: Komax 331)

User interfaces.
Flexible Windows®-based interfaces are used on all PC-controlled fully automatic crimping machines. These interfaces offer a high level of convenience and great data security thanks to their realistic representation of processes and intelligent linking of data. (Example in photo: Komax TopWin)

Networking.
Production data is transferred to the Komax fully automatic crimping machines via a simple and flexible interface and feedback is returned through that same interface. This feature massively reduces changeover times and eliminates input errors. (Example in photo: Komax WPCS – Wire Processing Communication Standard)

Management software.
With the clearly arranged management software, you can centrally create and manage parts, articles and jobs. The jobs are then sorted and distributed to the fully automatic crimping machines. This approach assures a better utilization of the machines and increased productivity. (Example in photo: Komax TopNet)

Your benefits
- Direct transmission of measured values to the basic machine
- Production to high quality standards, traceable data
- Ease of operation, reduced setup and changeover times
- Central monitoring, programming and control of the systems – optimized production
- Already available production data importable at any time
Professional service – before and after the sale

Komax gives top priority to providing fast, professional on-site service. With its full-coverage service network, the Komax Group offers customers comprehensive services both before and after a sale. These services range from advice on what machine to purchase and on-schedule setup to quick delivery of spare parts.

To make your purchase decision easier, Komax is also happy to conduct tests and produce samples for you. It even compiles a detailed test report for you if you wish. With this kind of support, you can rest assured that you have the best-suited machines for processing your wire connections in the future with maximum performance and maximum quality.
Your benefits
- Productivity in no time at all
- Professionally trained operating and maintenance personnel
- Lasting improvement in machine productivity
- Calculable maintenance costs
- Spare parts delivery within 24 hours, ex Komax

Professional on-site installation. Through over 50 subsidiaries and representative offices, Komax assures on-schedule and professional setup of your machines. Komax service technicians undergo continuing training on a regular basis to keep their knowledge of products and technical expertise fully up-to-date.

Individually customized training. Komax offers training for operators, machine setters, and maintenance and service technicians both on-site and at its training center. This training is absolutely essential for assuring the availability and maximum service life of the machines and optimum production.

Production support and service agreements. On request, Komax service staff assists you on-site for a set period of time with setting up and/or adapting the machines to match your specific production conditions. To avoid repairs and production downtimes, you can also opt to have Komax experts handle the regular maintenance of your machines.

Spare parts and wear parts. To assure the best possible readiness of your machines, Komax offers on-site spare-parts stores and the same-day dispatch of parts shipments from headquarters. Komax also guarantees that parts will be available for many years after the last machine of a given type is sold.
Komax – professionals in advanced automation

Founded in 1975, the Komax Group is one of the world’s leading suppliers of wire processing systems and automatic assembly machines on the market today. Komax offers a comprehensive range of products covering everything from the processing of simple wires to the complex and fully automatic production and testing of entire modules and wire harnesses.

The Komax Group also provides fast, professional on-site services ranging from the development of customer-specific solutions to setup, maintenance, repairs and training to production support.

To be able to offer you the most reliable solutions for meeting the challenges of the future, Komax invests an above-average percentage of its resources in development and engineering. This extra effort produces forward-looking machines and systems that will help Komax customers be among the winners of the future.