



ALPHA 520

crimp to crimp



ALPHA 520

The Alpha 520 is a fully automatic crimp-to-crimp machine configured specifically for the industrial market. It is perfect for customers who want to produce small and large batch sizes and a very wide range of lengths, cross sections and wire end designs. Operation is intuitive and controlled by the proven Komax HMI system. Customers profit from a wide range of process modules and individual solutions.

Unique processing spectrum

- Various wire qualities with cross sections from 0.13 – 6 mm² (AWG 26 – 10) are processed gently and with high precision. Cross sections from 0.05 mm² (AWG 30) are possible after feasibility test.
- Even short wires from 20 mm (0.78 in) are easy to handle.
- Large selection of process and quality modules.
- Customer specific solutions on request.

High productivity

- The simple and fast setup and material changeover processes guarantee economical production even with small batch sizes and frequent material changes.
- Multilingual Komax HMI control and intuitive operation ensure minimal training requirements. Guided processes assure that the machine can be operated easily.

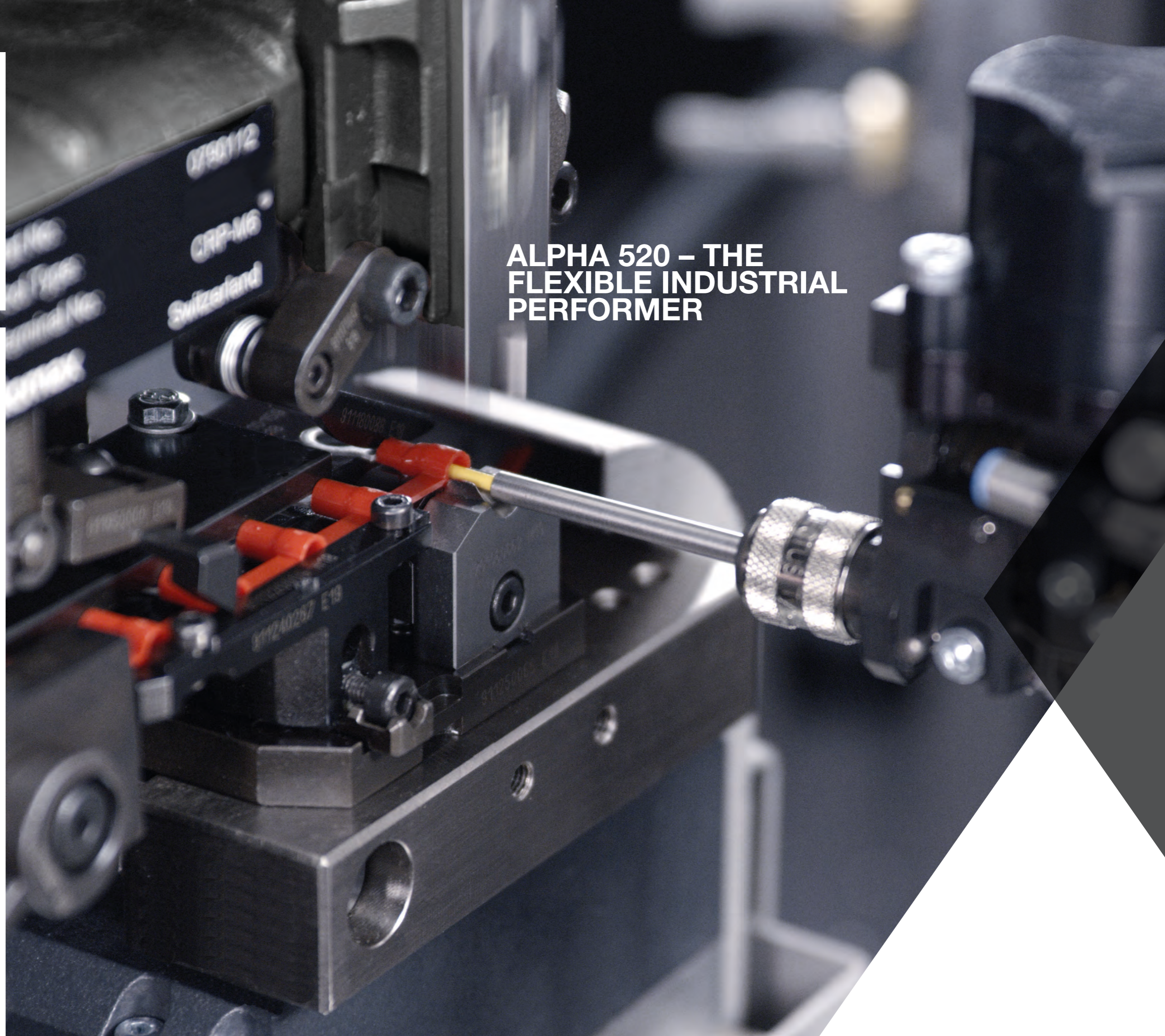
Outstanding quality concept

- Integrated quality monitoring and quality verification simplify operation and increase productivity.
- The Q1250 scalable module visually verifies the correct stripping, the presence of crimps or seals and the proper execution of each crimping and sealing process.

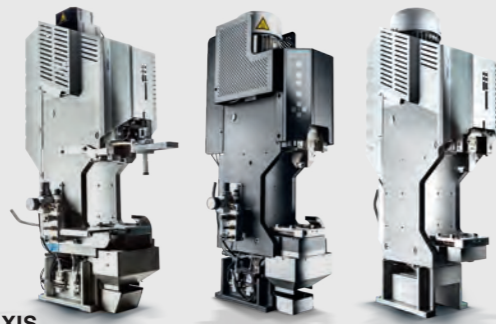
Integration of third-party modules

- The machine and Software base enables easy integration of non standard modules.
- Despite the integration, the software retains its basic structure. This means that the customer can continue to benefit from standard software updates.

ALPHA 520 – THE FLEXIBLE INDUSTRIAL PERFORMER



C1370 / C1360 / C1340
CRIMP MODULE ; OPTION MOTORIZED Z-AXIS



S1441
SEAL MODULE



X1582
TWISTING MODULE



AEH-LS
FERRULE MODULE



CM03*
MIL CRIMP MODULE
* on request



X1585
FLUXING/TINNING MODULE



SLEEVE MODULE*
* on request



DC
DOUBLE GRIPPER MODULE



Various quality tools

- Optical quality monitoring; Q1250 scalable
- Crimp height verification; Komax 341
- Pull off force verification; Q1210
- Microscope; Komax 345
- Barcode scanner
- Splice detection

Optimized for industrial needs

The Alpha 520 offers plenty of space and good accessibility to the modules. More than four modules can be integrated on request.

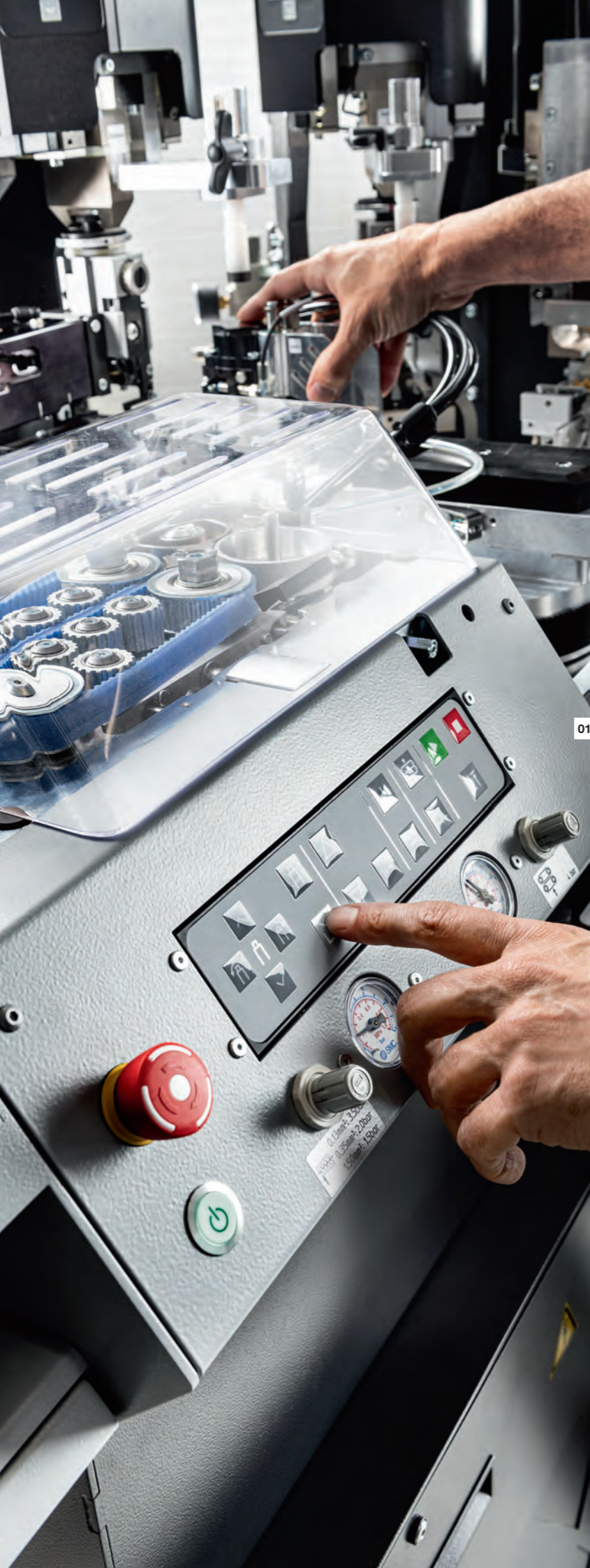
Motorized z-axis of the crimping modules

The optionally available automatic height adjustment of the crimping module ensures fast changeover and correct production right from the start, especially also with closed terminals.

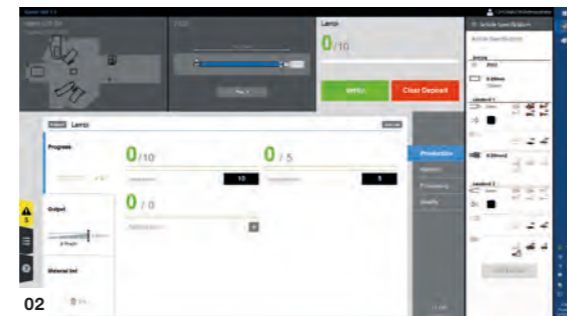
The correct article-specific height can be stored in the HMI, and the entire crimping module is automatically raised or lowered to the correct position.

COMBINE THE PROCESS AND QUALITY MODULES OF YOUR CHOICE

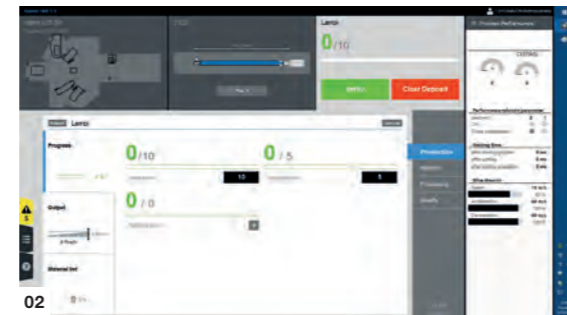




01



02



02

01
Convenient, efficient and safe setup process.

02
Intuitive user interface with customizable dashboards to increase efficiency and transparency.

03
The X1582 twisting module can twist stripped wire ends without damaging the strands, even for extremely thin wires.

04
Consistent tin flow and perfect temperature on the X1585 fluxing/tinning module ensure high quality tinning of the strand ends.

05
With the double gripper module the wires are positioned perfectly to produce an ideal double crimp.



03



04



05

Simple, efficient and safe setup and material change over

The setup concept on the Alpha 520 is intuitive, efficient and exceeds the latest safety standards. When the safety cover is open, the drives are safely switched off (e.g. crimp modules).

The swivel arm is moved to the desired position by hand and confirmed by pressing a button (hand-teaching).

With the safety cover closed, the wire position can be adjusted using one of the three control panels distributed throughout the base machine.

Guided workflow and additional functions

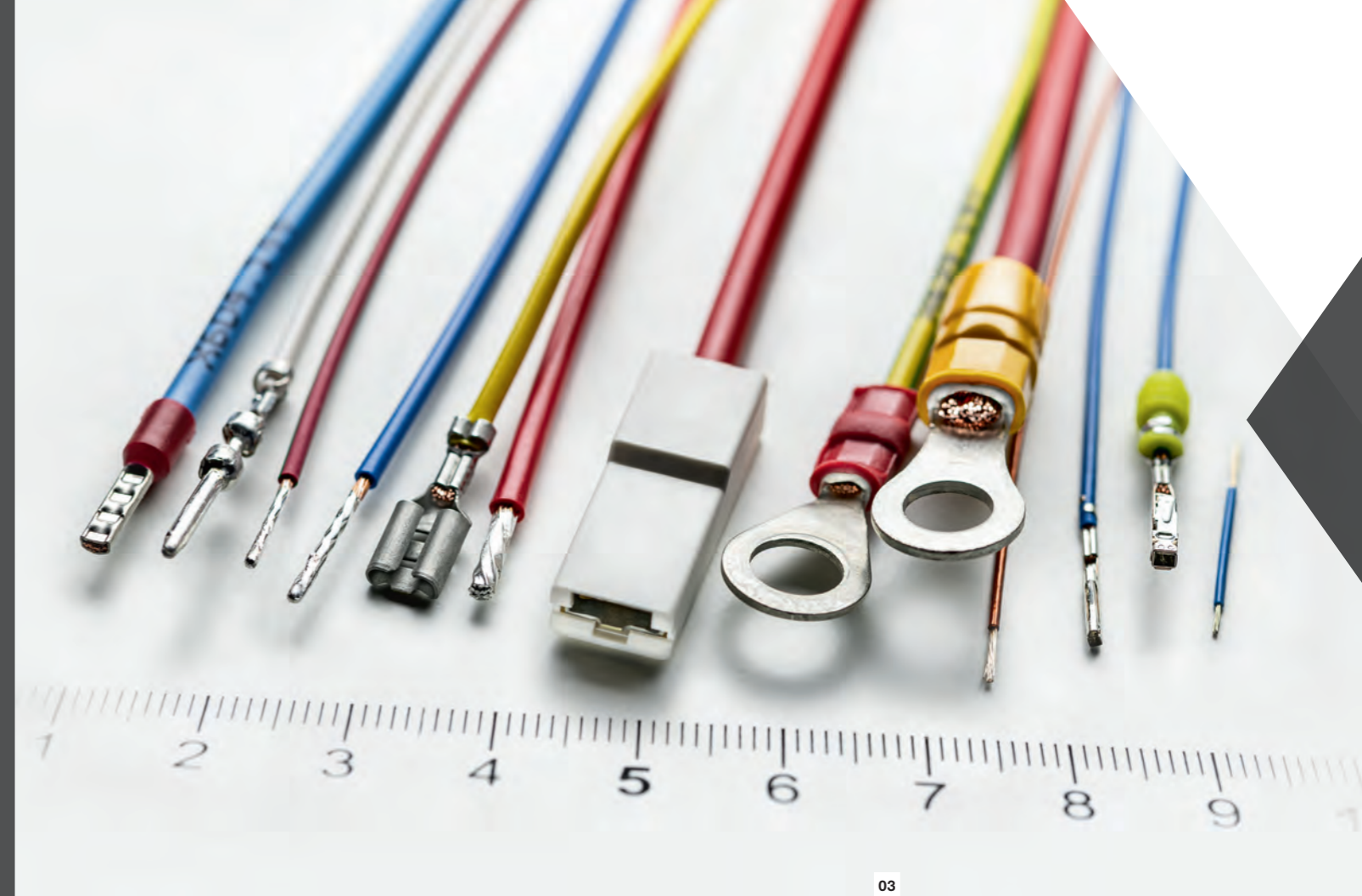
The intuitive user interface makes the operation fast to learn and easy to operate. The Komax HMI operating software guides the operator step by step along the workflow. Additional steps like extra samples or quality verifications can easily be integrated.

The optional machine dashboard provides additional functions with specific benefits, for example job list optimization or repeated production of a previous article. The customizable dashboards help to increase the transparency, efficiency and productivity.



01
02

CUSTOMIZED AUTOMATION PRECISELY TAILORED TO YOUR SPECIAL PRODUCTION CHALLENGES



03
04



Customized Automation

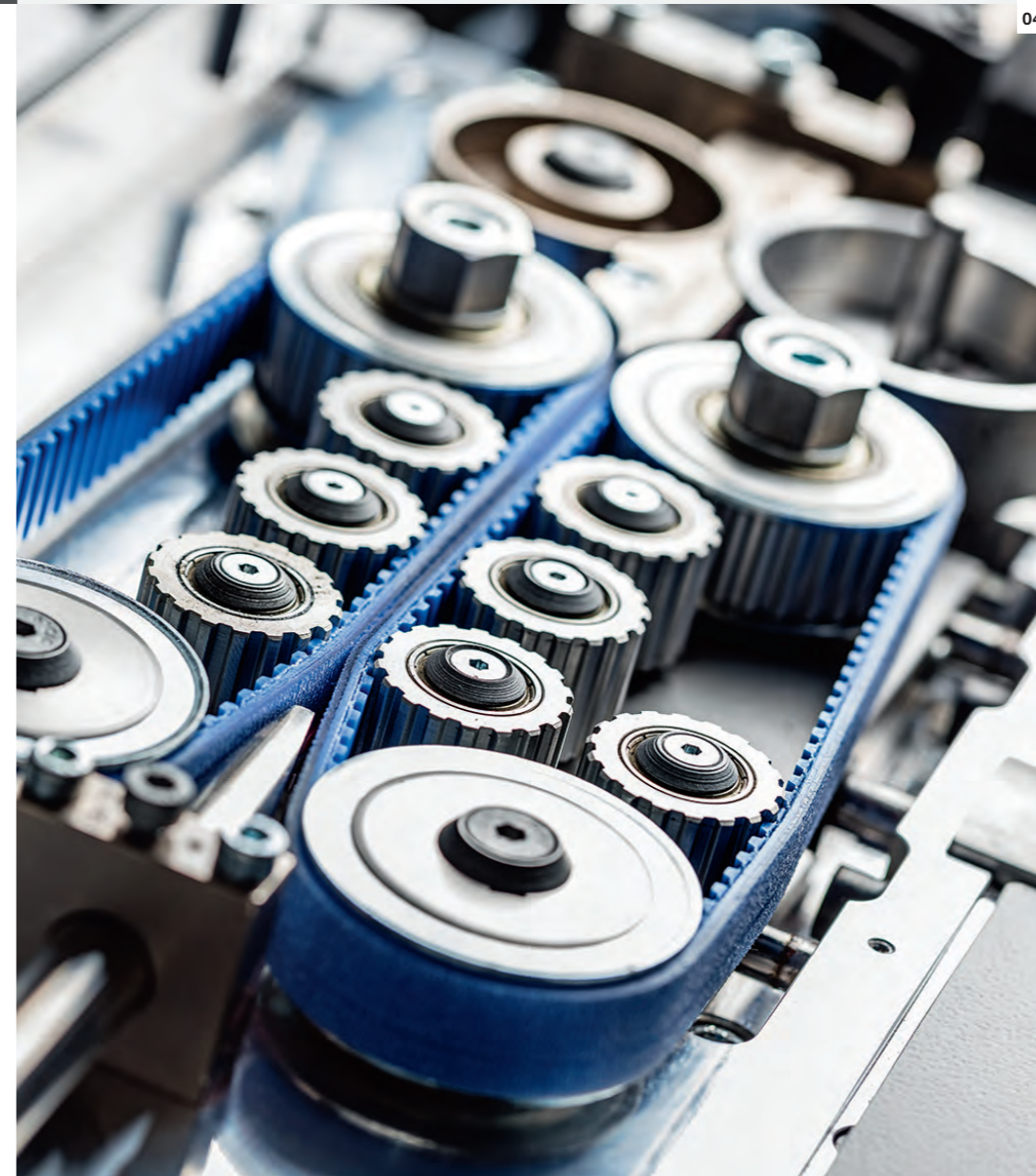
Reach easy, automated production of your most demanding wires. We offer the perfect solution for all your wire production challenges. It's tailored to your wire processing needs and enables you to achieve outstanding automated jobs with your Alpha 520. Unique applications put you at the top of the game.

Ready for the future

The Alpha 520 is based on our latest modular platform, which is also used on other Alphas. Through common parts strategy, spare parts management is greatly simplified. The platform is ready for the future, i.e. ready for integration into MES systems or for connectivity.

Easy integration of non-standard modules

Komax offers technical solutions for a lot of customer-specific requirements. Thanks to the modularity of the platform the equipment remains on a high degree within the standard. This brings the customer essential benefits for spare & wear part handling and also for software upgrades.

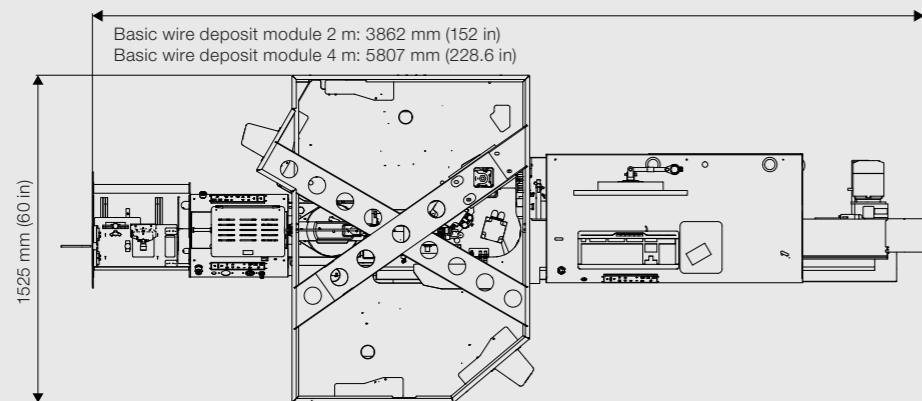


- 01** Integration of a Mira multi-layer strip device on the Alpha to operate special wires. Simplify your work and get more efficient and economical with our customized solutions.
- 02** Side-by-Side blade holder for thin, short wires.
- 03** Alpha 520 offers a very wide range of wire end processes and even very short and thin wires.
- 04** The reliable and durable belt drive allows quick wire change with simple and efficient wire feed-in.

Technical data

Wire cross section*	0.05 – 6 mm ² (AWG 30 – 10)
Wire draw-in speed	max. 10 m/s (33 ft/s)
Outside diameter of conductor	max. 5.1 mm (0.20 in.)
Wire length**	20 – 65 000 mm (0.88 in – 213 ft)
Full stripping	0.1 – 30 mm (0.004 – 1.18 in)
Partial stripping	0.1 – 29 mm (0.004 – 1.14 in)
Crimp force	1 – 22 kN (224 – 4 946 lbf)
Process modules	Side 1: 2 Side 2: 2 On request more stations possible
Noise level (w/o crimping)	< 80 dB (w/o applicators)
Electrical connection	3 × 208 – 480 V / 50 – 60 Hz / 5 kVA
Compressed air connection	5 – 8 bar (73 – 116 psi.)
Air consumption Crimp / Crimp Crimp-Seal / Crimp-Seal	< 7 m ³ /h (247 ft ³ /h) < 11 m ³ /h (388.5 ft ³ /h)
Weight (incl. 2 crimp modules)	1.3 t (2866 lbs.)

* Cross sections < 0.13 mm² / > AWG 26 available as application after feasibility test. Also larger wire cross section are possible on request after feasibility test. Very hard and tough wires may not be able to be processed even if within specification. Komax can arrange feasibility tests for prior evaluation.
** Tolerance of wire lengths ±(0.2% + 1 mm (0.039 in))
Deposit length > 12 m on request



Height with cover closed: 1790 mm (70.5 in)
Height with cover completely open (maximum opening): 2790 mm (109.8 in)



01



02

01
Quick change of the guide tubes without tools.
02
The tools are within reach at any time in the practical, lockable drawer situated directly under wire draw-in.



Options and accessories

Automatic wire handling	F1110 • F1150 • ads 1xx
Marking systems	Komax 26 hot-stamp marker • Komax inkjet marking systems • Laser marking on request
Blade holder	Side-by-side blade holder
Process modules	C1370/C1360/C1340 crimp module • S1441 seal module • Double gripper module • X1582 twisting module • X1585 tinning module • AEH ferrule module Possible on request: Sleeve module • MIL crimp module • Welding module • Ultrasonic compaction and many more.
Quality control	Crimp Force Analyzer CFA/CFA+ • Integrated crimp height measurement • Integrated pull-out force measurement • Q1250 scalable optical stripping-, seal- and crimp monitoring • Material change detection • Material verification • Splice detection • Terminal end detection • Q1140 spark tester on request
Deposit systems	Basic module 2 m (78.7 in) or 4 m (157.5 in) Extension module 2 m (78.7 in) or 4 m (157.5 in)
Accessories	Quick-change wire draw-in • Bar code scanner • Intermediate stripping on request
Software	Komax HMI • Komax MES • MIKO networking interface • WPCS/MIKO Converter

Processing examples

Cutting to length		Split cycle for closed terminals	
Cutting pulled strands		Seal insertion	
Full stripping		Twisting/tinning	
Partial stripping		Sleeve insertion*	
Core processing*		Ferrule crimping	
Double casing, coaxial and triaxial cables*		MIL crimping*	
Center stripping*		Wire-end compaction, splicing, welding*	
Crimping		Hot-stamp marking*	
Double crimping		Inkjet marking	

* Available on request

KOMAX SERVICES

Gaining operational flexibility and production assurance
at the minimum cost during the entire machine's lifetime.

PRE-SALES

Consultancy- + Configuration Support
"Solution, tailored to your specific needs"

INSTALL

Acceptance Tests + Ramp-up Support
"Ensure a perfect start"

FINANCING

Alternative + flexible packages available
"Designed to meet your financial needs"

DIGITAL SOLUTION

Komax Connect + data2wire
"Keep control of performance"

TRAINING

On.Site, On.Line + On.Class Trainings
"Building a qualified and adaptable staff"

MAINTENANCE

Komax Care Maintain,
Field- + Original Parts Services
"Ensure production capacity at
predicable cost"

REPAIR

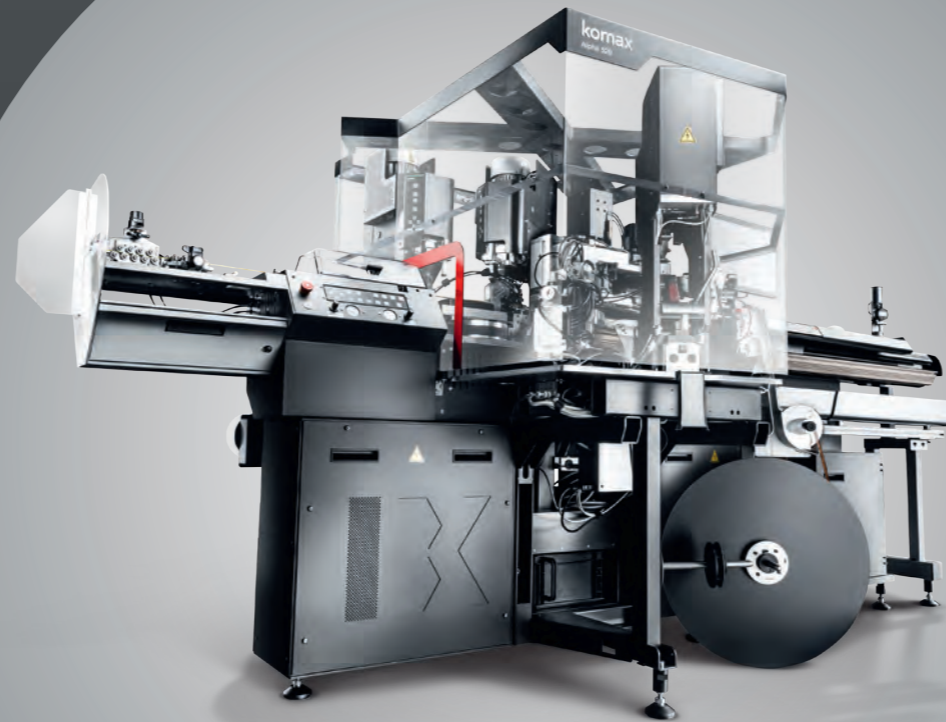
Warranty Extension,
Field- + Original Parts Services
"Services to get you back to
business fast"

SUPPORT

Komax Direct, Remote
Support + Feasibility Checks
"Easy access to our experts"

MODERNIZE

Upgrades + Accessories
"Leverage innovation to improve
performance"



At Komax, our focus is on providing our clients with the best possible service and support. Therefore, don't hesitate to contact your local Komax Partner to learn more about Komax Services.



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.

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