



ALPHA 550

crimp to crimp



komax WIRE

ALPHA 550 MAXIMUM PERFORMANCE

Consistent high productivity and flexibility with maximum precision are the requirements fully automated wire processing has to meet, both today and in the future. The Alpha 550 – the latest fully automatic wire processing machine for two-sided seal loading – meets these requirements across the entire spectrum with revolutionary technology. The Alpha 550 can yield crucial competitive advantages with its unmatched unit cost performance, flexible production output and superb quality. The machine comes with an ACD automatic conductor detector as a standard feature.

Best in class productivity

- High machine speed for the best unit cost performance
- Fastest conversion for maximum production output
- First-time-right: perfectly synchronized machine processes with excellent CpK results

Powerful and flexible

- Robust and reliable processing of wire cross sections ranging from 0.13 to 6 mm²
- Produces special and complex applications thanks to flexible machine configuration

Ready for the future

- Most modern, forward-looking machine technology for highest requirements
- Integrated automatic conductor detection (ACD) for superb quality stripping
- Equipped for future requirements thanks to quality monitoring and gentle wire processing

TOP PERFORMANCE IS OUR CONNECTION TO THE FUTURE.

▶ Absolutely precise processing with double blade head and automatic conductor detector (ACD).



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KONTAKT-ARM-TRIEBE

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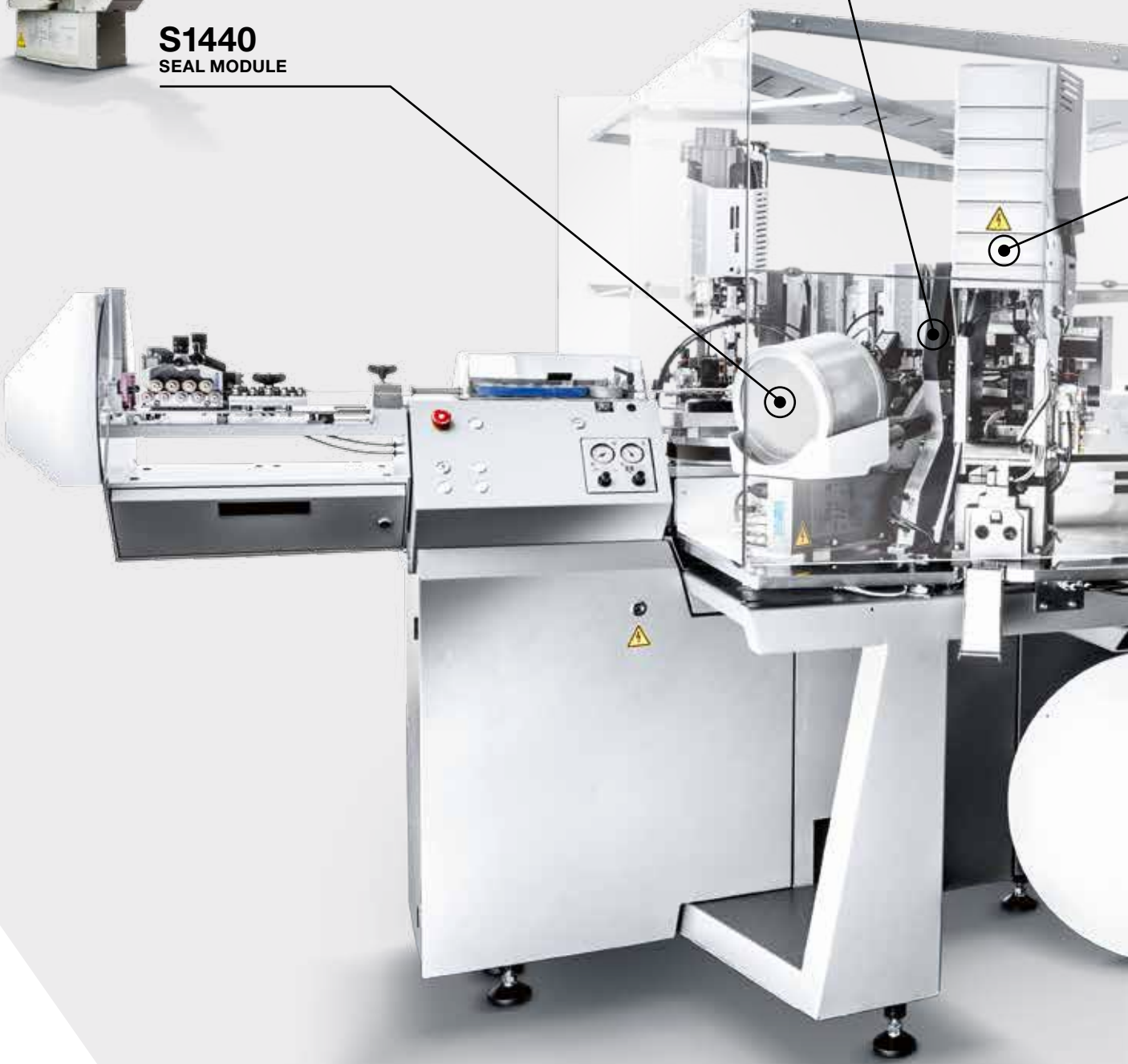
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S1440
SEAL MODULE



Q1240
STRIP QUALITY CHECK



THE STRONGEST IN ITS CLASS



C1370
CRIMP MODULE



At high speed for top unit cost performance

With its high processing speed, the Alpha 550 achieves the best unit cost performance in its class. All system components are designed for top performance. The processes are perfectly coordinated. For example is the conveyor belt speed in the new deposit system automatically adjusted to ensure consistent optimum throughput.

Ultra-fast conversion for maximum productivity

Simple, fast setup and conversion approaches allow short travel paths while accelerating the procedures. With the touch screen, keyboard and mouse, the Alpha 550 can be operated in a time-saving and ergonomic fashion. The TopWin software allows the next job to be loaded without halting operations and the material and the tool to be prepared. Indicator lamps and LED-illuminated work zones optimize and expand user guidance.



MAXIMUM PERFORMANCE
HAS NEVER BEEN
**MORE FLEXIBLE
AND MORE ROBUST.**





03

01
The robust swivel arm with its unbeatable repeat accuracy supports stable wire processing.

02
Highly effective option: quick-change wire draw-in.

03
Quick and reliable setup directly on the crimping module.

First-time-right approach for almost no rejects

Perfectly synchronized machine processes and quality assurance and monitoring functions ensure top precision and excellent CpK results. Processes are optimum thanks to the reliable EtherCAT technology.

Robust system

Powerful servomotors position the swivel arm with unrivaled repeat accuracy. The mechanical and electronic components are well-protected from dirt and ambient influences and also suitable for environments with high temperatures and moisture.

Versatile options

Various options, such as the linear quick wire changer and the quick mobile terminal changer (MTC) for fast crimp tool changes, enable optimal flexible operation within the stable system.

Customer-specific and individualized

The different processing modules make it possible to have complex and individualized configurations with up to four stations. Customer-specific processes can be programmed on request.

The market leader's quality and expertise

Komax Wire assures the maximum performance capability of the system by delivering holistic, comprehensive quality. It considers all components and rounds out these efforts with local services globally.



**Q1240 strip quality check
for maximum quality**

The Q1240 quality tool runs an optical check on stripping quality and automatically separates out defective products. Easy integration in the production process without learning. Compared to the option CPS (cut pulled strands), it boosts the output rate by as much as 10 percent.

**C1370 crimping module
for maximum productivity**

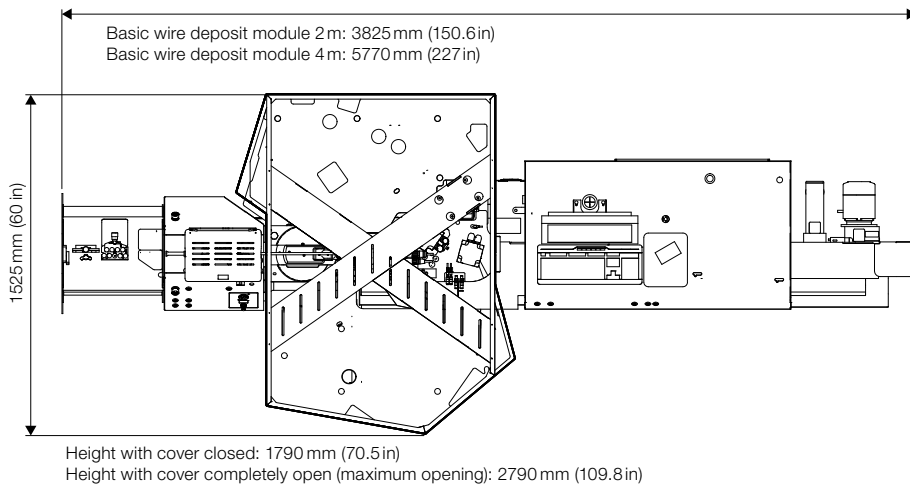
Shortest setup and conversion times are achieved thanks to efficient user guidance with cable positioning directly on the module. CFA+ assures the highest level of quality and the lowest possible rate of rejects. The robust crimping module design delivers extraordinary repeat accuracy and automatically adjusts the crimp height during the teaching procedure.

**S1440 seal module
for maximum flexibility**

The module automatically loads seals on the cables, namely all the usual varieties of seals including mini-seals. Precision mechanics combined with seal position monitoring ensures a high degree of process reliability. The module can be converted quickly from one variety of seal to another.



The efficient belt drive reliably draws in the cable at a speed of up to 12 m/s. A pneumatic or mechanical setup module is optionally available.



Technical data

Wire cross sections	0.13–6 mm ² (AWG 26–10)*
Wire draw-in speed	Max. 12 m/s (39 ft/s)
Outside diameter of conductor	Max. 5.1 mm (0.20 in)
Length range	60–65 000 mm (2.35 in–213 ft)**
Full strip	0.1–29.5 mm (0.004–0.98 in)
Half strip	Max. 35.5 mm (1.4 in)
Crimp force	Max. 22 kN (Max. 4 496 lbf)
Processing stations side 1/2	2/2
Noise level	<80 dB (without crimp tool)
Electrical connection	3 × 208–480 V/50–60 Hz/5.6 kVA
Compressed air connection	5–8 bar (73–116 psi)
Air consumption Crimp/Crimp Seal crimp/Seal crimp	<7 m ³ /h (247 ft ³ /h) <11 m ³ /h (388.5 ft ³ /h)
Weight (incl. 2 crimping modules)	1.30 t (2866 lb)

* Depends on wire material.

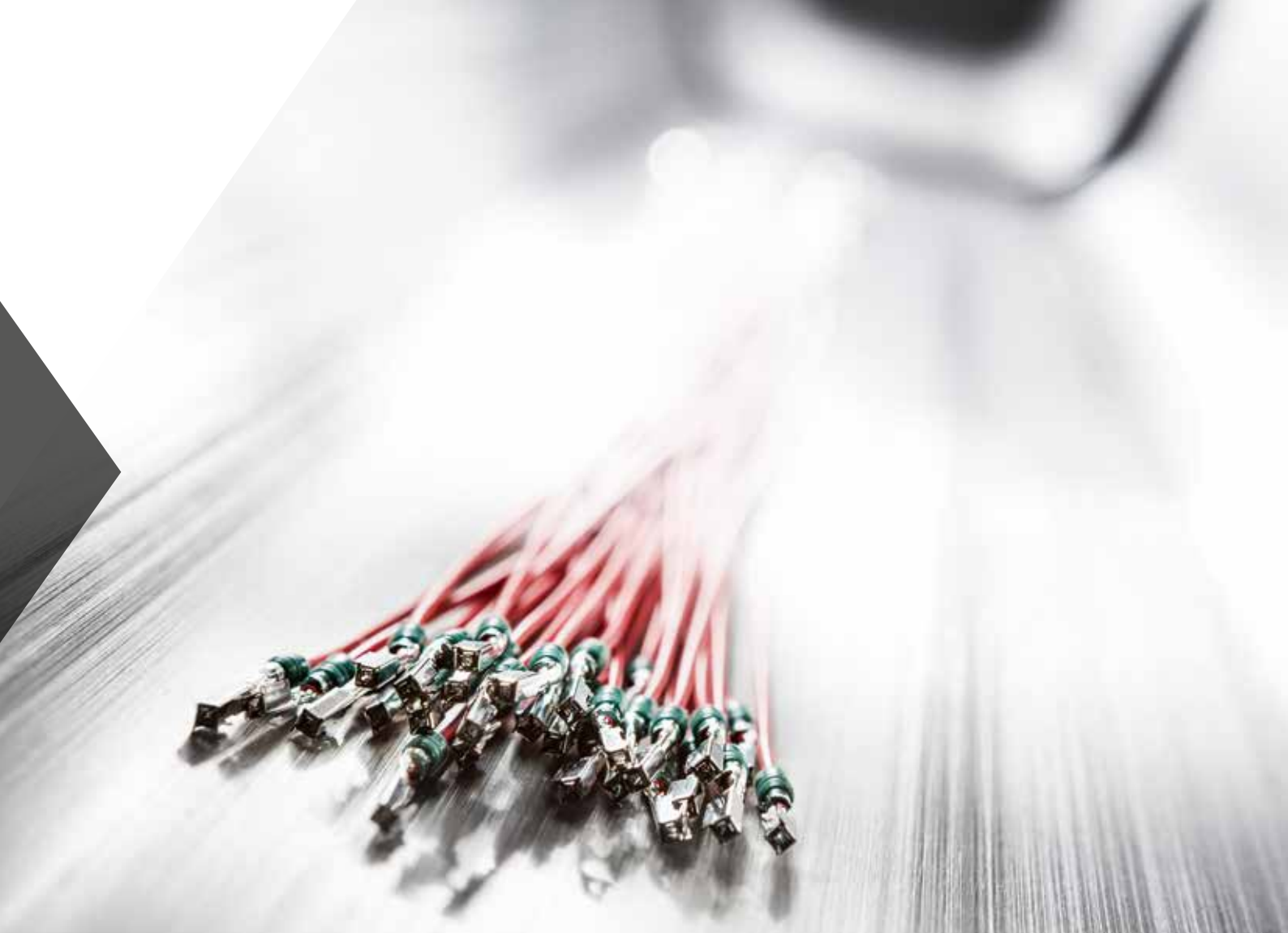
** Repeat accuracy ± (0.2% + 1 mm [0.04 in])

Uniform guide tubes support optimized cable handling for the thinnest cables from 0.13 mm² to 6 mm².



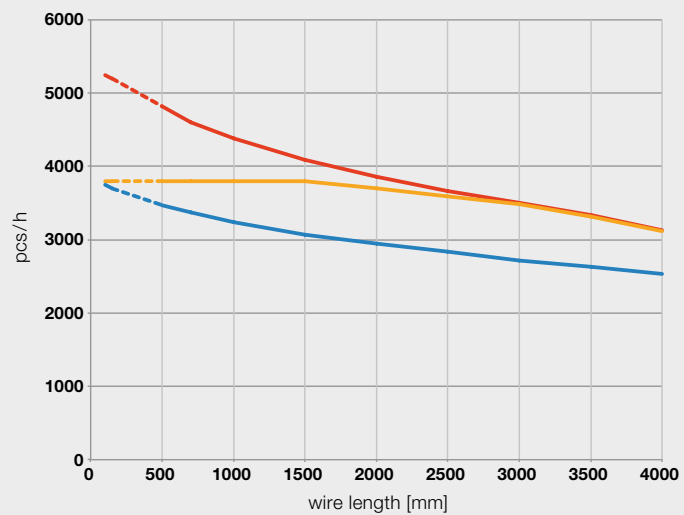
The tools are within reach at any time in the practical, lockable drawer situated directly under wire draw-in.



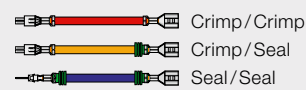


The finished cables are placed gently in the smooth deposit unit made of stainless steel.

Output rate



FLRY conductors	0.5 mm ² (AWG20)
Wire draw-in speed	12 m/s
Crimping module	C1370
Seal module	S1440
Crimp force analysis	Active
ACD, Q1240	Inactive
Deposit gripper	Active





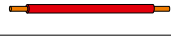










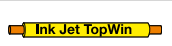





The actual output rate can vary with application and machine configuration.

Options and accessories

Automatic delivery systems	Komax 106 • ads 119 • ads 123 • F1150
Marking systems	Komax 26 hot-stamp marker • Komax IMS inkjet marking systems • Laser marking on request
Processing modules	C1370 crimping module • S1440 seal module • mci 782 twisting module • ioc 785 tinning module • mci 792 sleeve insertion module • Double gripper module • AEH ferrule module • MIL crimp module • Welding module • Ultrasonic compaction
Quality control	Komax 341 Integrated crimp height measurement • Q1210 Integrated pull-out force measurement • Q1240 strip quality check • Material change detection • Material verification • Splice detection • Q1140 spark tester • SPM seal position monitoring • Terminal end monitoring
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 tool changing system • PM8300 bar code scanner
Software	WPCS networking interface • TopConvert data conversion • Komax CAO control center

Processing examples

Cutting to length		Double stroke function for closed terminals	
Cutting pulled strands		Seal loading	
Stripping with full strip		Twisting/tinning	
Stripping with half strip		Sleeve insertion	
Flat cable/notching		Ferrule crimping	
Processing of inner conductors		MIL crimping	
Double casing, coaxial and triaxial cables		Wire-end compaction, splicing, welding	
Intermediate stripping		Hot-stamp marking	
Crimping		Inkjet marking	
Double crimping			

Komax Wire – industry leader today and in the future

As the pioneer and market leader in automatic wire processing, Komax Wire supplies its customers with innovative solutions fit for the future in all areas calling for precise terminal connections. Standardized and customer-specific machines are supplemented by various processing modules, individual application parts as well as suitable software and interfaces to achieve safe, efficient production. Development and production are carried out within the globally active Swiss company at different locations. A comprehensive sales and service network supports customers with standardized service processes in more than 50 countries locally on site, ensuring the availability and sustainable value of their investments after commissioning. The Swiss company Komax Wire is part of the globally operating Komax Group with about 1,500 employees.



Market segments

Komax Wire offers outstanding competence and solutions for various areas of application and draws on them to generate the desired value-added for the entire process and optimize economic efficiency in line with customer requirements. The main markets of Komax Wire are as follows: automotive, aerospace, industrial and telecom & datacom. With this breadth of experience, customers obtain expert knowledge for process optimization and access to the latest technologies.



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