



ALPHA 550

crimp to crimp



komax

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 insertion – 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 is available with ACD automatic conductor detector and Q1240 and Q1250 optical quality monitoring tools.

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 accurate 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 holder and optional automatic conductor detector (ACD).



0045592
R=0.50

0045589
R=1.00

0045583 R=0.50
Laser-etched stainless steel

0045592
R=0.50

0045589
R=1.00

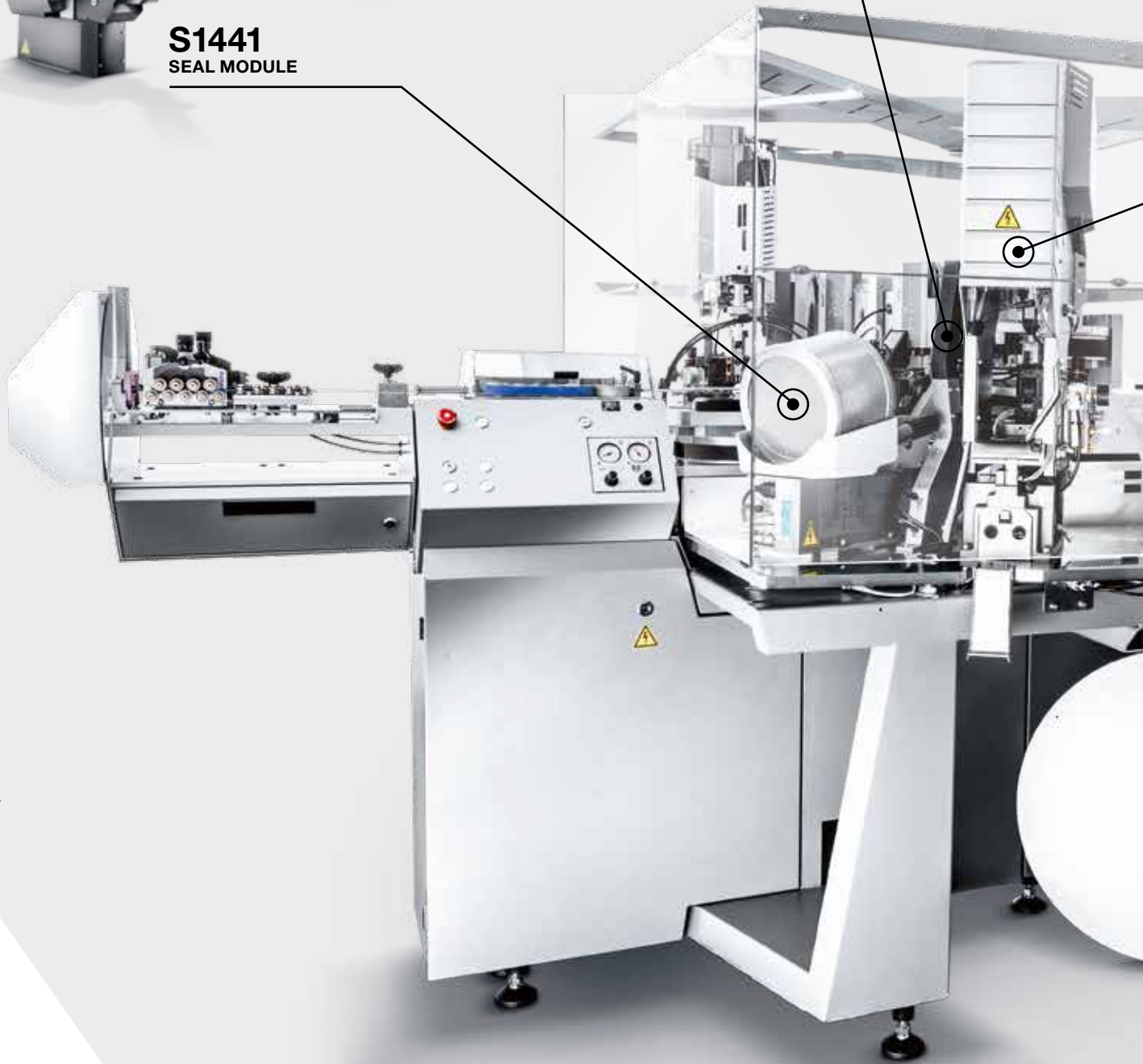
X101
S1



S1441
SEAL MODULE



Q1240 / Q1250
OPTICAL QUALITY MONITORING



THE STRONGEST IN ITS CLASS



C1370 / C1360 / C1340
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 machine 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 crimp 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 stationary (STC) or mobile (MTC) terminal changer for fast crimp tool changes, enable optimal flexible operation within the stable system.

Customer-specific and individualized

The different process 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 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.



Optical quality monitoring Q1240/Q1250

The Q1240 quality tool runs an optical check on the strip quality and automatically rejects defective products. It can be easily integrated into the production process without training. Seal monitoring, which checks the seal position and alignment, is also available. The product quality can be seamlessly traced by means of statistics, image storage and network feedback.



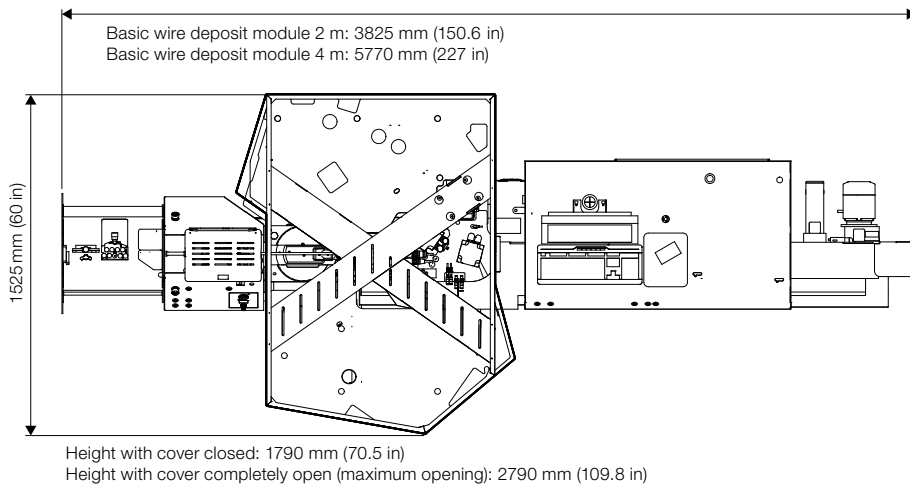
C1370/C1360/C1340 crimp module for maximum productivity

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 crimp module design delivers extraordinary repeat accuracy. Function such as stroke and split cycle are easily programmed. The C1370 automatically adjusts the crimp height during the teaching procedure.

S1441 seal module for maximum flexibility

The module automatically fits wires with common seals and mini-seals. The combination of precision mechanics and the new Q1240 seal position monitoring function guarantees a high degree of process safety and maximum productivity. The module can be simply and quickly switched from one seal variety to another.





Technical data

Wire cross sections	0.13 – 6 mm ² (AWG 26 – 10)* Up to 10 mm ² (AWG 8) on request as application
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.)** optional 30 – 60 mm (1.18 – 2.36 in.)
Full stripping	0.1 – 29.5 mm (0.004 – 1.16 in.)
Half stripping	max. 35.5 mm (1.4 in.)
Crimp force	max. 22 kN (max. 4946 lbf.)
Process modules 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 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.)

* Very hard or tough wires may not be able to be processed under certain circumstances although they are within the specification. Komax offers feasibility tests for testing the wires in advance. The processing of larger wire cross sections is possible on request.

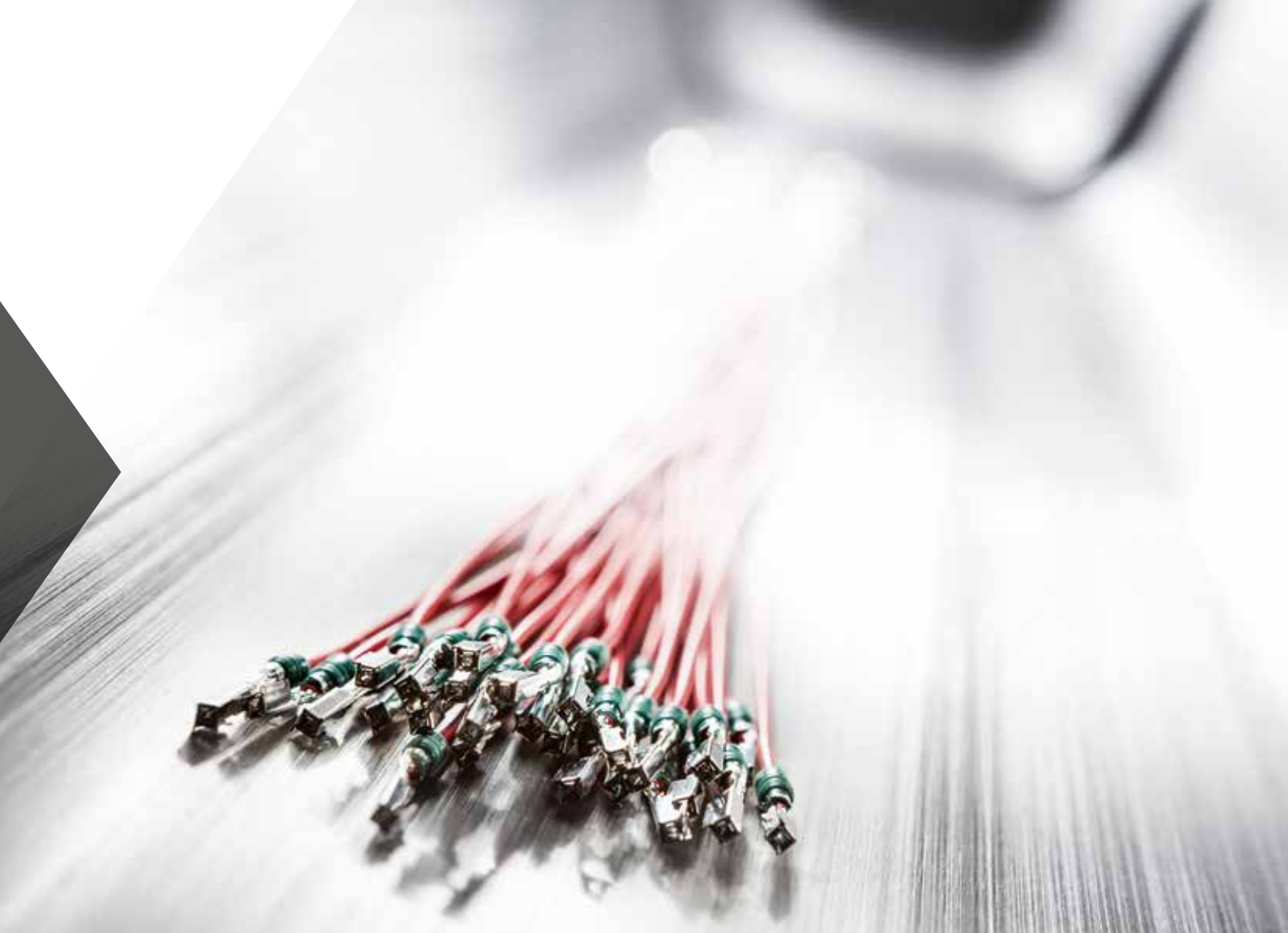
** Repeat accuracy ± (0.2 % + 1 mm [0.04 in])



01
 Uniform guide tubes support optimized cable handling for the thinnest cables from 0.13 mm² to 6 mm².

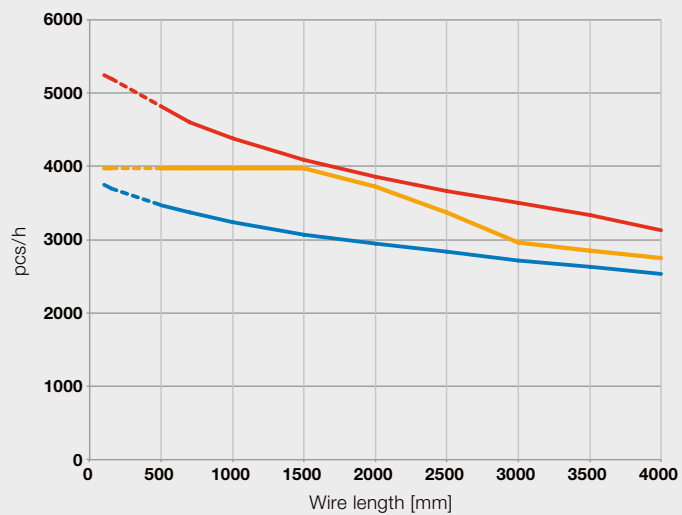
02
 The tools are within reach at any time in the practical, lockable drawer situated directly under wire draw-in.

03
 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.



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

Output rate



FLRY conductors	0.5 mm ² (AWG 20)
Wire draw-in speed	12 m/s
Crimp module	C1370
Seal module	S1441
Crimp force analysis	Active
ACD, Q1240	Inactive
Deposit gripper	Active












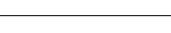



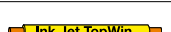


-  Crimp/Crimp
-  Crimp/Crimp-Seal
-  Crimp-Seal/Crimp-Seal

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 inkjet marking systems • Laser marking on request
Blade holders	Double-blade line for V-blades and special blades
Process modules	C1370/C1360/C1340 crimp module • S1441 seal module • X1582 twisting module • X1585 tinning module • mci 792 sleeve 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/Q1250 optical strip-ping-, seal- and crimp monitoring • ACD automatic conductor detection • Material change detection • Material verification • Splice detection • Q1140 spark tester • Terminal end detection • MircoForce 70
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	STC or MTC crimp tool quick-change system • Quick-change wire draw-in • Bar code scanner • MX5050 intermediate stripping
Software	Komax HMI • TopWin • MIKO networking interface • WPCS/MIKO Converter • WPCS networking interface • TopConvert data conversion

Processing examples

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

Komax – leading the field now and in the future

As a pioneer and market leader in the field of automated wire processing, Komax provides its customers with innovative and sustainable solutions for any situation that calls for precise contact connections. Komax manufactures series and customer-specific machinery for various industries, catering for every degree of automation and customization. Its range of quality tools, test systems, and intelligent networking solutions complete the portfolio, and ensure safe and efficient production. Komax is a globally active Swiss company with development and production facilities on several continents. Komax uses its extensive distribution and service network, which includes local companies and their employees, to support customers across the world on site, thus ensuring the availability and value of their investments after equipment commissioning through standardized service processes.



Market segments

Komax 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 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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YEARS
CUTTING
EDGE

Komax AG
Industriestrasse 6
6036 Dierikon, Switzerland
Phone +41 41 455 04 55
Fax +41 41 450 15 79

komax
komaxgroup.com