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.

TOP PERFORMANCE
IS OUR CONNECTION TO THE FUTURE.

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

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

Q1240
STRIP QUALITY CHECK

S1440
SEAL MODULE

THE STRONGEST
IN ITS CLASS

C1370/C1340
CRIMP MODULE

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.

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 throuhput.

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

01
The robust swivel arm with its un-beatable 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 / C1340 crimping module
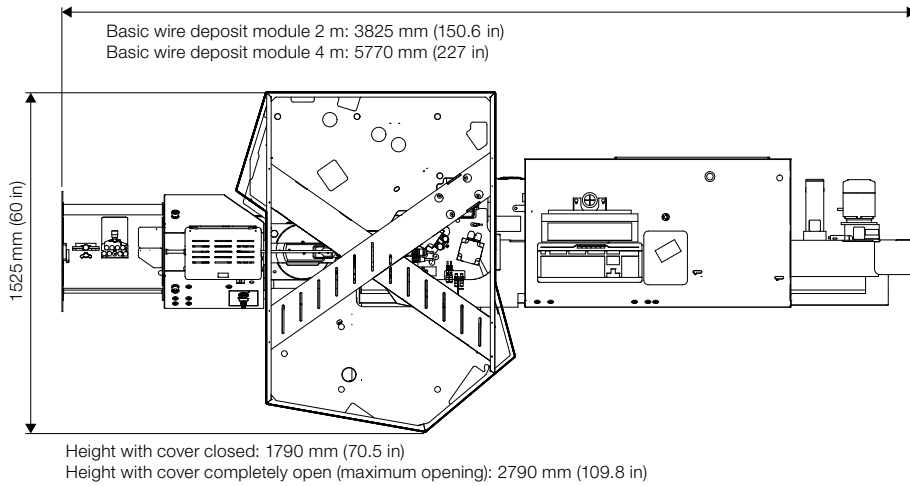## for maximum productivity

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. Function such as stroke and split cycle are easily programmed. The C1370 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.

Basic wire deposit module 2 m: 3825 mm (150.6 in)
Basic wire deposit module 4 m: 5770 mm (227 in)

1525 mm (60 in)

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

Technical data

Wire cross sections	0.13 – 6 mm² (AWG 26 – 10)*
Wire draw-in speed	max. 12 m/s (39 ft/s)
Outer diameter of conductor	max. 5.1 mm (0.20 in.)
Length range	60 – 65'000 mm (2.35 in. – 213 ft.)**
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. 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 Crimp-Seal / Crimp-Seal	< 7 m³/h (247 ft³/h) < 11 m³/h (388.5 ft³/h)
Weight (incl. 2 crimping modules)	1.30 t (2'866 lbs.)

*Depends on wire material.
** Repeat accuracy ± (0.2 % + 1 mm [0.04 in])

01

02

03

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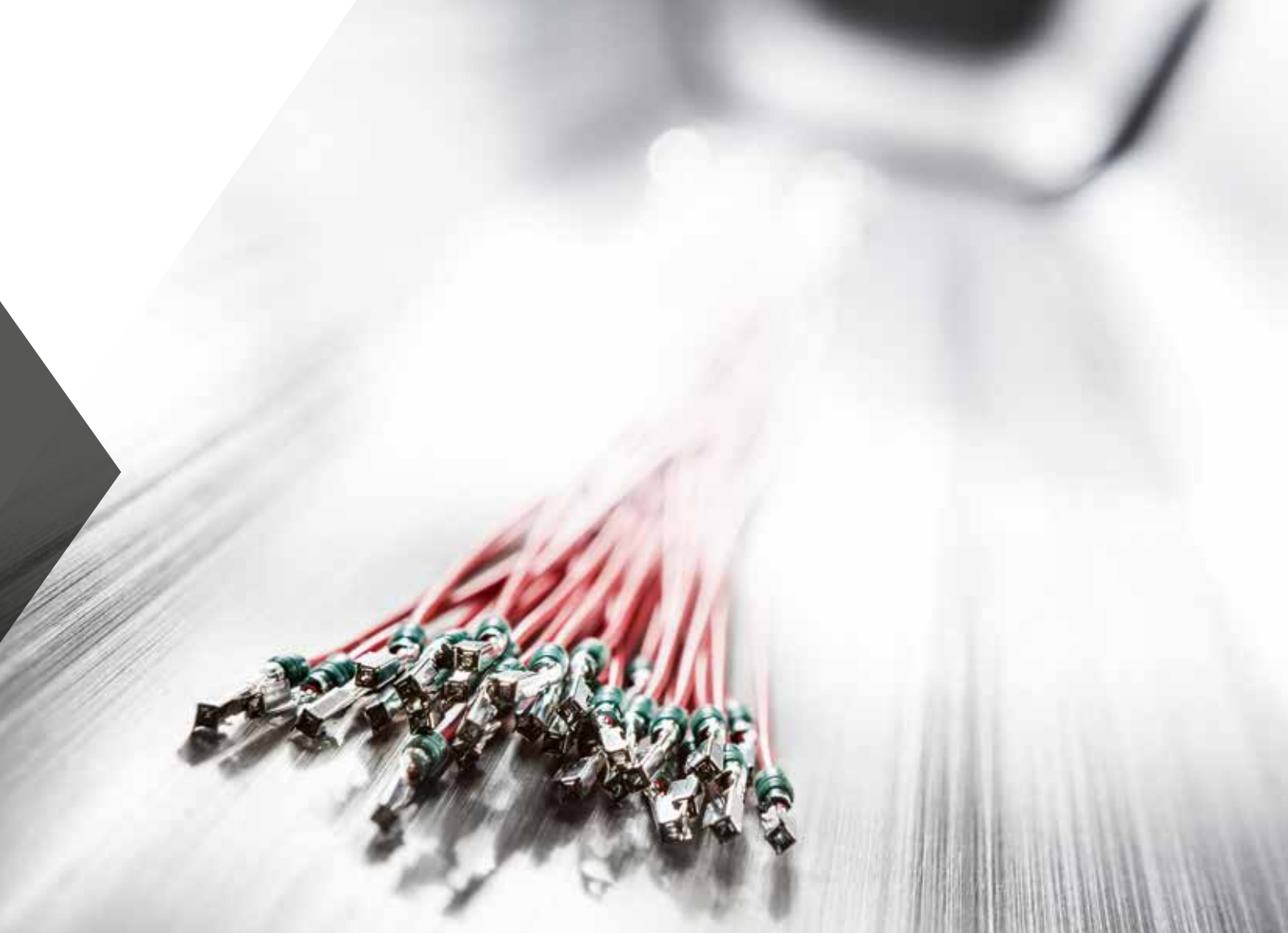
The finished cables are placed gently in the smooth deposit unit made of stainless steel.

Output rate
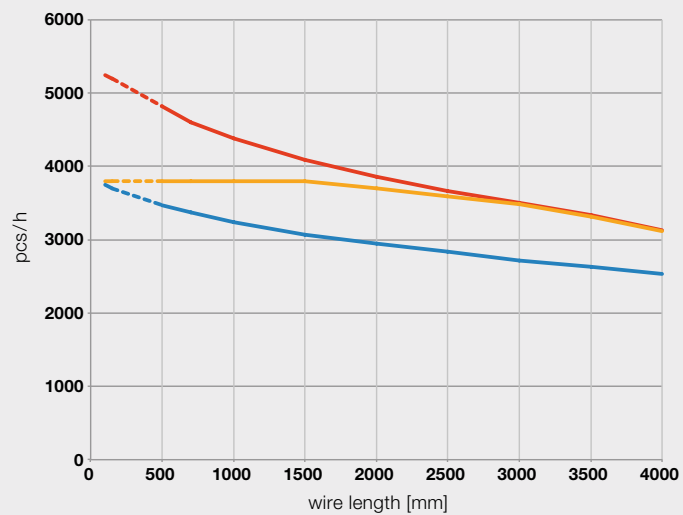
FLRY conductors	0.5 mm² (AWG 20)
Wire draw-in speed	12 m/s
Crimping module	C1370
Seal module	S1440
Crimp force analysis	Active
ACD, Q1240	Inactive
Deposit gripper	Active
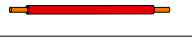
— Crimp / Crimp
— Crimp / Crimp-Seal
— Crimp-Seal / Crimp-Seal

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

Options and accessories

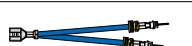|	
Automatic delivery systems	Komax 106 • ads 119 • ads 123 • F1150
Marking systems	Komax 26 hot-stamp marker • Komax IMS inkjet marking systems • Laser marking on request
Blade holders	Double-blade line for special blades
Processing modules	C1370 / C1340 / C1320 crimping module • S1440 seal module • 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 • 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	Quick tool changing system • PM8300 bar code scanner
Software	WPCS networking interface • TopConvert data conversion • Komax CAO control center • DLW

Processing examples

Cutting to length		Split cycle function 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 Wire – industry leader today and in the future

As the pioneer and market leader in the field of automated wire processing, Komax Wire provides its customers with innovative and sustainable solutions for any situation that calls for precise contact connections. Komax Wire manufactures machinery and equipment for various industries, catering for every conceivable 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. The Swiss company, which has operations all over the world, develops and manufactures its products at various locations. Its extensive distribution and service network supports customers locally in more than 60 countries through standardized service processes, while ensuring the ongoing availability and value of these customers' investments once the equipment has been put into operation. The Swiss company Komax Wire is part of the international Komax Group, which employs approximately 1,500 people.

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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