



# ALPHA 530

crimp to crimp



**komax** WIRE

## **ALPHA 530** THE ROBUST ALL-ROUNDER

Solid, reliable technology coupled with innovative solutions ensures and increases your company's ability to add value. The Alpha 530 – the fully automatic crimping machine for one and two-sided crimping and seal loading – meets this criteria with solid, powerful technology. The fast setup and conversion times of the Alpha 530 contribute to a high level of productivity. Quality options such as ACD and SQC can be retrofitted and satisfy the highest quality requirements.

### **Unrivalled robustness and durability**

- Reliable processing of wire cross sections ranging from 0.13 to 4 mm<sup>2</sup> (optionally 5 mm<sup>2</sup>)
- Solid and reliable processes with powerful, durable technology
- Reduced maintenance costs thanks to the unique approach to wearing parts
- Designed for demanding ambient conditions

### **Productive with incredibly fast changeover**

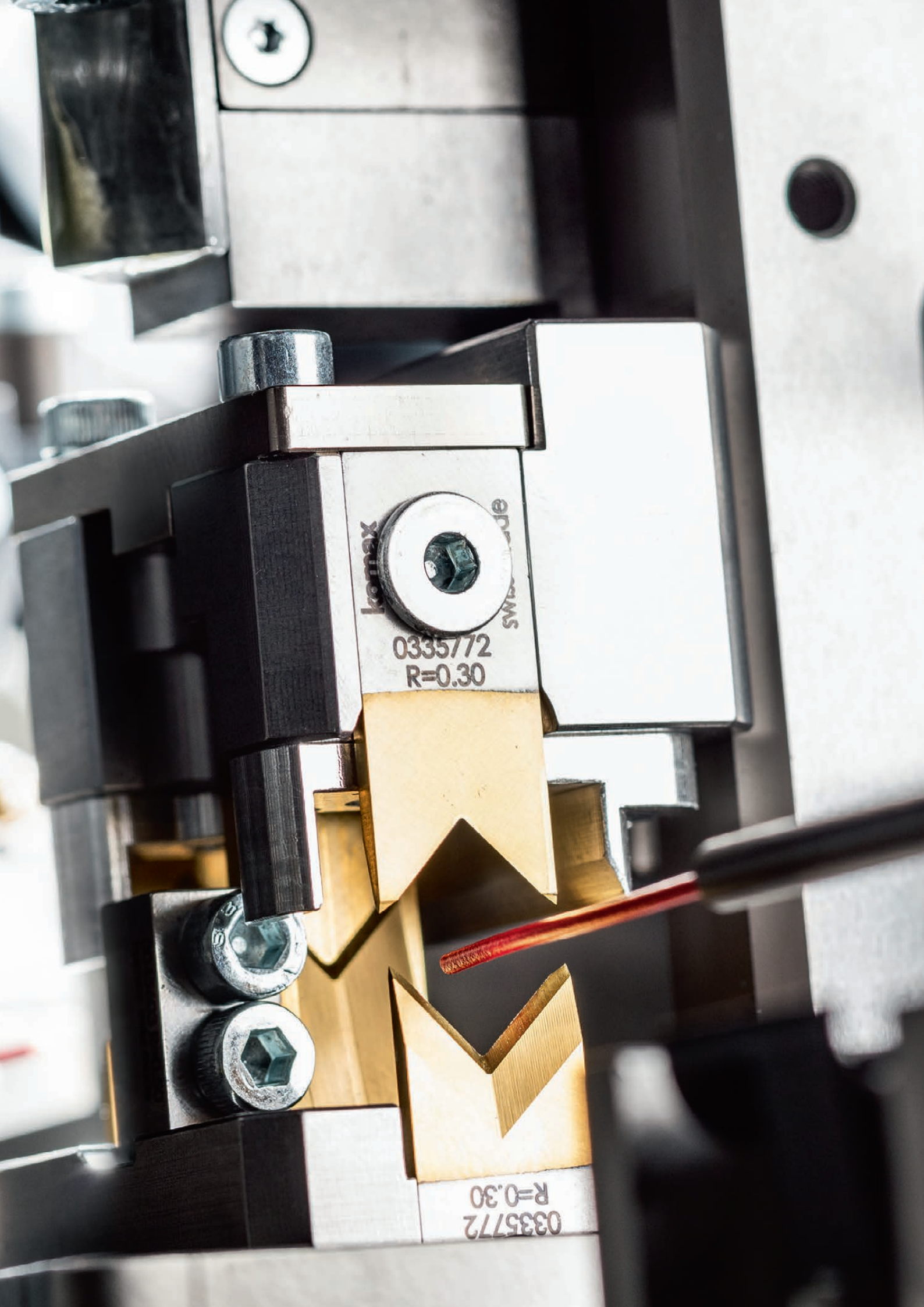
- First time right – perfectly synchronized machine processes enable excellent CPK results
- Highly robust machine configuration
- Can be retrofitted with unique quality monitoring such as ACD, Q1240 (SQC)
- Wires handled carefully, gently during processing

### **Precise and outstanding quality**

- Increased performance thanks to ultra-fast machine setup and operation
- Quick and highly efficient changing of cables, crimp tools, terminal rolls
- New deposit system for maximum output

**DURABLE  
INVESTMENTS  
ARE MORE  
PROFITABLE.**

**Double side**  
Absolutely precise  
processing with  
single-line blade  
head.



komax  
SWISS MADE

0335772  
R=0.30

0335772  
R=0.30

# ROBUST AND MAXIMUM PRODUCTIVITY



### Attains maximum productivity in no time at all

The work flow is enhanced by short paths between crimp and wire and cutting stations, all with LED-illuminated work zones. With the help of the optional linear quick wire changer and the quick MTC mobile terminal changer, the Alpha 530 can be converted even more quickly to a different production operation.

### Lightning-quick to convert, parallel setup procedures

Simple, fast setup and conversion approaches allow short travel paths while accelerating the conversion and setup procedures. With the touch screen, keyboard

and mouse, the Alpha 530 can be operated in a time-saving and ergonomic fashion. The TopWin software allows the next job to be edited without halting operations and the material and the tool to be prepared. Indicator lamps and LED-illuminated work zones optimize and expand user guidance.

### First-time-right approach – minimal rejects

Top precision, even at maximum system performance and excellent CPK results – the machine processes and the functions for quality assurance are perfectly attuned to each other. The reliable EtherCAT technology guarantees optimum processes.

### Quality assurance by Komax Wire

Quality production means quality products: Komax Wire develops and produces the elements of quality assurance itself. The highest requirements of the automotive industry are satisfied. The optional available automatic conductor detector (ACD) ensures quality monitoring even for the finest wires. The ACD detects the slightest contact between blade and conductor strands during stripping. Any interruption in contact is thereby eliminated. Other avail-

able options include integrated strip monitoring (Q1240) to assure stripping quality, crimp force analysis (CFA+/CFA) to detect missing strands and seal position monitoring (SPM) for seal processing.

### Gentle wire guidance

The pneumatic wire straightening unit reduces wire friction and wear during processing. By actively monitoring roller pressure, it prevents conductor damage, for example, during machine stoppage. To protect the cables while they are being deposited, the conveyor belt speed is automatically adjusted. The Alpha 530 reliably removes any damaged cables by itself.

### The market leader's quality and expertise

Komax Wire assures the maximum performance capability of the Alpha 530 by delivering holistic, comprehensive quality. It considers all components and rounds out these efforts with local services globally.



01



02

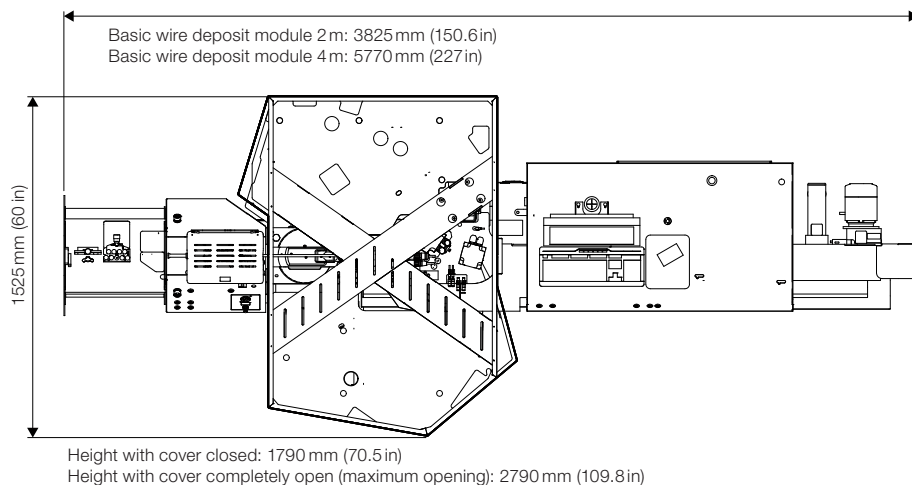


03

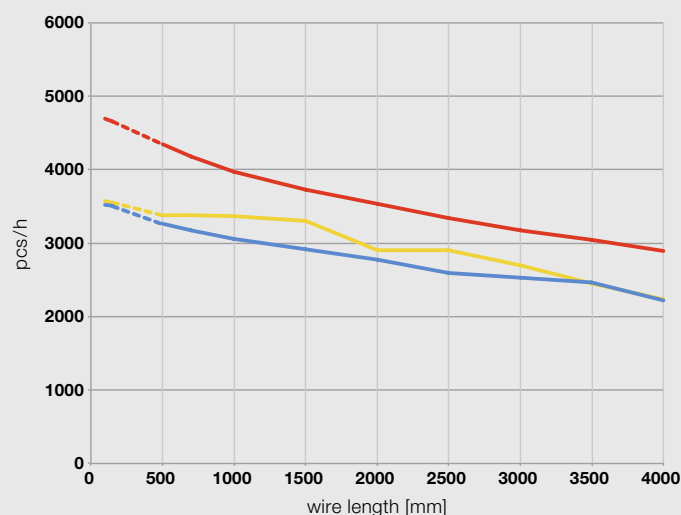
**01**  
Quick and reliable setup directly on the crimping module.

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

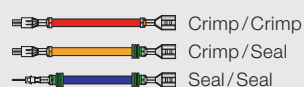
**03**  
Uniform guide tubes support cable handling for the thinnest cables from 0.13mm<sup>2</sup> to 4mm<sup>2</sup>.



## Effective output rate



FLRY conductors	0.5 mm <sup>2</sup> (AWG20)
Pressure	6 bar (87 psi)
Wire feed speed	9 m/s
Crimping module	C1370
Seal module	S1440
Crimp force monitoring	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 117 • ads 123 • F1150
Wire drive	Belt drive • Roller drive
Marking systems	Komax 26 hot-stamp markers • Komax IMS inkjet marking systems • Laser marking on request
Blade holders	Single-blade line for V blades • Double-blade line for V blades
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	Integrated crimp height measurement • Integrated pull-out force measurement • ACD automatic conductor detection • 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) • Deposit gripper
Accessories	Quick tool changing system • PM8300 bar code scanner
Software	WPCS networking interface • TopConvert data conversion • Komax CAO control center

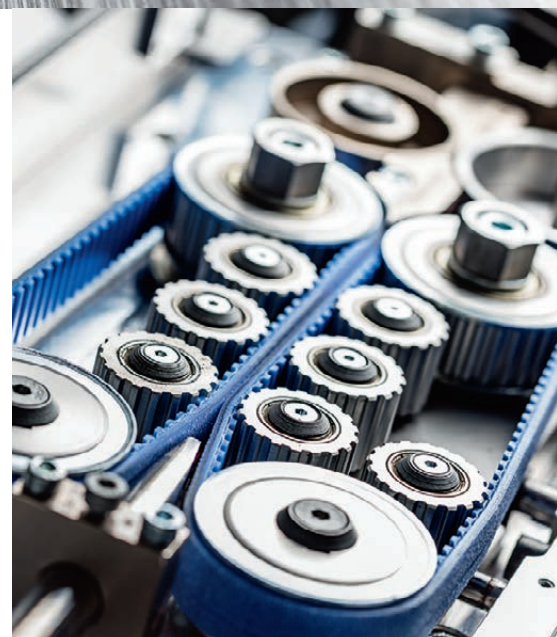


The finished cables are placed in the smooth deposit unit made of stainless steel.

## Technical data








Wire cross sections	0.13–4 mm <sup>2</sup> (AWG 26–12)* Optional 0.13–5 mm <sup>2</sup>
Wire draw-in speed	Max. 9 m/s (29 ft/s) (belt drive)
Outside diameter of conductor	Max. 5.1 mm (0.20 in)
Length range	60–65 000 mm (2.35 in–213 ft)
Full strip side	0.1–15.5 mm (0.004–0.6 in)
Partial strip	15.5 mm (0.6 in)
Crimp force	1–22 kN (224–4 496 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 <sup>3</sup> /h (247 ft <sup>3</sup> /h) < 11 m <sup>3</sup> /h (388.5 ft <sup>3</sup> /h)







\* Depends on material out of which the cable is made.









The efficient belt drive reliably draws in the cable at a speed of up to 9 m/s.

## Processing examples

Cutting to length	
Cutting pulled strands	
Stripping with full strip	
Stripping with half strip	
Flat cable/notching	
Processing of inner conductors	
Double casing, coaxial and triaxial cables	

Intermediate stripping	
Crimping	
Double crimping	
Double stroke function for closed terminals	
Seal loading	
Twisting /tinning	

Sleeve insertion	
Ferrule crimping	
MIL crimping	
Wire-end compaction, splicing, welding	
Hot-stamp marking	
Inkjet marking	

## 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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