GAMMA 450

crimp to crimp

komax

EN

BEST-IN-CLASS
SETUP AND CHANGEOVER

GAMMA 450

The compact, fully automatic Gamma 450 processes crimps and seals on both sides and takes up minimum space. It guarantees high production availability and traceable quality. The wire processing machine has all the necessary key functions and can also be extended for specific purposes using an extensive range of options. High-performance modules ensure seamless quality monitoring. Optimized quick-change systems reduce set-up and changeover times. Handling is intuitive and ergonomic – easy and error-free thanks to the Komax HMI operating software. This combination contributes significantly towards achieving stable and optimal productivity.

High level of process stability and comprehensive monitoring
– New machine platform based on tried-and-tested Alpha technology
– Complete quality monitoring, thanks to a fully integrated quality concept

Fast setup and changeover
– Quick manual wire change
– Short replacement times for tools and terminals thanks to STC
– Reduced changeover times thanks to machine operation at the crimp module

Compact machine design and efficient operation
– Simple and user friendly
– The machine design meets global ergonomic requirements
– Komax HMI software with Green Button for error-free and efficient production
– Comprehensive transparency across the entire production process

Cost-effective maintenance
– Conveyor belt can be used on both sides
– Good machine access for short maintenance times
– Common-parts strategy with Alpha 530/550 reduces complexity and costs for spare parts

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01
Fast cable insertion without cross section-dependent guide elements.
02
The stationary quick terminal changer STC (optional) reduces changeover times.

C1370 / C1360 / C1340
CRIMP MODULE

Q1250 SCALABLE
OPTICAL QUALITY MONITORING

S1441
SEAL MODULE

MAXIMUM
QUALITY ASSURANCE AND EFFICIENCY

Gamma 450 – exceptionally economical
The Gamma 450 fulfills all the requirements of future-proof, cost-effective wire production. The precise modules and functions required can be customized individually on four stations. With these supplementary options, the compact machine provides the required functional scope, powerful performance and seamless quality monitoring.

Ergonomic working conditions, logical workflows and the simplest possible user guidance all promote a cost-effective production process. Maintenance costs have been optimized by having a common-parts strategy. This makes the machinery less complex, brings down costs for spare parts and reduces training requirements.

Maximum availability and efficiency
The Gamma 450 processes crimps and seals with cross sections of 0.13 to 4 mm² on both sides. The proven, robust technology ensures continuous machine availability with minimal downtimes. Shorter routes and stringent processes between work zones improve the workflow and the productivity. Operation of the machines is aided by optimal lighting in the work areas and dimensions that are adapted to suit global standards.

01

REDUCED TO
THE MAX

02

03

01
Intuitive, correct operation thanks to Komax HMI operating software
02
Q1250 scalable, optical quality monitoring
03
Quick, secure set-up directly on the module

Fast setup and changeover

The optional STC tool and terminal reel quick-change system enables the terminal rolls and crimp tools to be changed during operation. The time-saving insertion of the wire into the belt drive takes place without the need for additional cross-section dependent guide elements. The option to use both sides of the drive roller ensures it has an above-average service life.

Full quality assurance and traceability

All integrated and optional modules and functions ensure seamless quality control. Perfectly coordinated with each other, they meet the high demands of the automotive industry. Integration with the MES manufacturing execution system provides documented traceability. The integrated CFA+/CFA crimp force monitoring detects missing individual wires and crimped insulation. The optional automatic conductor detector (ACD) ensures quality, even for the finest conductors. It detects the slightest contact between the blades and conductor strands during cutting and stripping. The quality tool Q1250 scalable offers the possibility to monitor both the stripping quality as well as the contact and seal assembly, and automatically sort out faulty products.

Simple and flawless operation with Komax HMI

Supported by the user guidance in the HMI operating software, the Gamma 450 can be set up in just a few steps. The large touchscreen makes operation of the HMI user interface easy. The use-case-driven design of HMI also ensures error-free data input while the Komax Green Button guides the user through the wire processing step by step.

Q1250 scalable

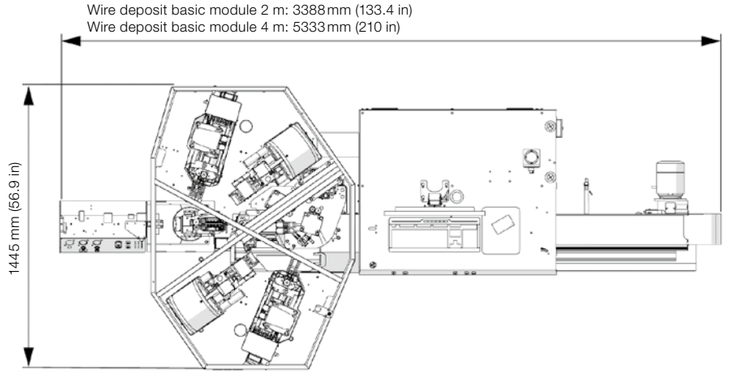
The Q1250 scalable enables users to adjust the level of checks according to their specific requirements, ranging from basic to advanced levels of quality control. This quality tool also allows for the individual monitoring and configuration of critical components such as stripping, seals, and terminals to ensure that they meet the necessary standards.

Tried and tested C1370/C1360/C1340 crimp modules with CFA+/CFA

The efficient user guidance and wire positioning directly on the module allows the shortest setup and changeover times. CFA+/CFA- guarantees the highest quality and minimal rejects. Combined with the time savings, this can increase productivity considerably. Features like the stroke and split cycle can be programmed easily. The C1370 and C1360 modules automatically adjust the crimp height during teach-in.

S1441 seal module for maximum flexibility

The module automatically fits wires with conventional seals and mini-seals. The combination of precision mechanics and the new 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.



Height with closed hood: 1775 mm (69.9 in)
Height with cover completely open (maximum opening): 2775 mm (109.3 in)
Lower wire lines of 90 mm compared to Alpha 530/550

Technical data

Wire cross-sections	0.13 – 4 mm² (AWG 26 – AWG 12)
Wire draw-in speed	max. 8m/s (26ft/s) belt drive
Wire outer diameter	max. 3.9 mm (0.15 in)
Length range	60 – 65 000 mm (2.35 in – 213 ft)** optional 33 – 60 mm (1.3 in – 2.36 in)
Full strip	0.1 – 16.5 mm (0.004 – 0.65 in)* With optional double blade up to 35 mm
Partial strip	0.1 – 16 mm (0.004 – 0.63 in)* With optional double blade up to 21 mm (S1) and 34.5 mm (S2)
Crimp force	1 – 22 kN
Process modules	Side 1 and side 2: 2 stations
Noise level	< 75 dB (without crimp tool)
Electrical connection	3 × 208 – 480 V; 50/60 Hz; 2.5 kVA or 3 × 400 V, 50/60 Hz, 2.5 kVA
Compressed-air connection recommended operating pressure	5 – 8 bar (73 – 116 psi) 6 ± 0.5 bar (87 ± 7.25 psi)
Air consumption of crimp / crimp seal crimp / seal crimp	< 6 m³/h (212 ft³/h) < 9 m³/h (318 ft³/h)
Weight (incl. 2 crimp modules + 2 seal modules)	920 kg (20828 lbs.)

* Depending on the nature of the cable material
** Repeat accuracy ± (0.2 % + 1 mm [0.04 in])
Deposit length > 8 m on request

02

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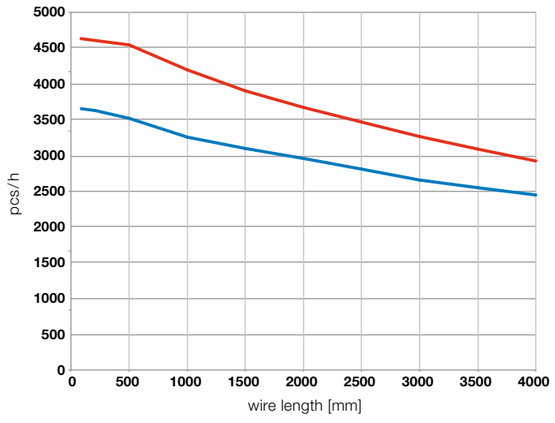
01
Absolutely precise processing thanks to the double blade holder and automatic conductor monitoring (ACD).
02
Tools are always available in the practical, lockable drawer.

Double-ended crimping and seal insertion.

Output rate



FLRY conductor	0.5 mm² (AWG 20)
Pneumatic pressure	6 bar (87psi)
Crimp module	C1370
Seal module	S1441
Crimp force monitoring	Active
ACD, Q1250 scalable	Inactive
Deposit gripper	Active

The actual piece output may vary depending on the application and machine configuration

Options and accessories

Prefeeder	Prefeeder
Wire drive	Belt drive
Marking systems	Komax inkjet printing systems
Blade holders	Single-blade line for V-blades • Double-blade line for V-blades and special blades
Process modules	C1370/C1360/C1340 crimp module • S1441 seal module • Double gripper module • X1582 twisting module • X1585 tinning module
Quality assurance	Integrated crimp height measurement • Integrated pull-out force measurement • ACD automatic conductor detector • Q1250 scalable optical stripping- and crimp monitoring • CFA+/CFA crimp force monitoring • Material change detection • Material verification • Splice detection • Terminal end detection
Deposit systems	Base 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	Stationary tool and terminal reel quick-change system • Wire quick-change system
Software	MIKO networking interface • Komax HMI

Processing examples

Cutting to length	
Cutting pulled strands	
Full stripping	
Half stripping	
Crimping	
Double crimping	
Split cycle function for closed terminals	
Seal insertion	
Twisting / tinning	
Material change detection	
Crimp tool – terminal – quick-change system	
Wire changer	
Programmable crimp height	
Inkjet marking	komax © Ink Jet
Prefeeder/dereeler	

Wire draw-in	
Wire deposit	
Incision monitoring	ACD
Stripping, terminal and seal monitoring	AUTO
Crimp force monitoring	CFA+
Crimp height measurement integrated	
Pull-out force measurement integrated	
Wire length correction	
Splice monitoring	
Good/bad separation	
Production in sequences	
Batch separation	
Networking	
Customer-specific processes *	PROG

* Available on request

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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Subject to change