



Alpha 355 S / Alpha 356

Multifunctional automatic crimping machines

komax WIRE



THE WAY TO MAKE IT | FLEXIBLE

With their open architecture, the Alpha 355S and Alpha 356 have a wide variety of applications. Besides Komax standard processing modules, many customer-specific modules can be easily integrated.

Alpha 355 S

You can mount up to five processing modules on the Alpha 355 S. In spite of its compactness, it offers excellent accessibility.

Alpha 356

With its extra large mounting surface, the Alpha 356 has room for up to seven processing modules. This machine is ideal if you need increased flexibility or have complex processes.

Areas of application

Along with the most frequent standard processes of crimping and seal loading, you can obtain a large variety of processing modules such as: fluxing/tinning, twisting the ends of wires, fitting with insulating sleeves and crimping modules for ferrule crimping and MIL-crimping, ultrasonic or resistance welding modules. You can integrate customer-specific process modules easily with the ultra-flexible TopWin software.

◀ **Alpha 356** With three crimp modules and two seal modules



▲ **Alpha 355 S** Basic module 4m with crimp tool quick-change system

High productivity

The quick wire selector, quick tool-change system and other options ensure excellent productivity especially if there are frequent changeovers. With the reliable TopWin software you can record and edit jobs while the machine is running.



▲ **Alpha 356** With crimp modules and seal module

User friendly

The drive unit for the blade holder is placed underneath, giving the machine a neat and ergonomic layout. All process modules have safety covers that open vertically for optimum access, and application-specific parts like applicators and contact rolls can be changed without tools. Controls are placed at decentralized positions, allowing the necessary machine functions to be triggered during setup. All setting and adjustment procedures can be controlled from the TopWin graphical user interface in the operator's choice of over 20 different languages.

Maximum quality control

Crimp-height measurement and pull-out force measurement are integrated in the process sequence. Optional material change detection and the optional barcode scanner help to prevent materials from getting mixed up. The processes are constantly checked against the specified values during production with functions that monitor crimp force, seals, splices, end of wire supply, and length. Any cables with processing defects are removed and an appropriate number of cables are post-processed automatically to replace them.

Conductor detector sensor ACD

Miniaturization and new technologies are making the quality requirements on cable processing tougher all the time. To satisfy the current automobile crimping standard for solder-free electric connections, Komax has developed the fully automatic conductor detection (ACD). This product recognizes even the slightest contacts between blades and conductor strands in the course of production. ACD is based on a capacitive measuring principle and integrated in the blade holder. It uses the regular stripping blades. The work range covers the entire spectrum of cross sections, any conductor length and stripping with full strip or partial strip. There are setup parameters to set the limits of monitoring desired. Defective conductor ends are removed fully automatically during production.



▲ ACD Conductor detector sensor

Strip Quality Check SQC

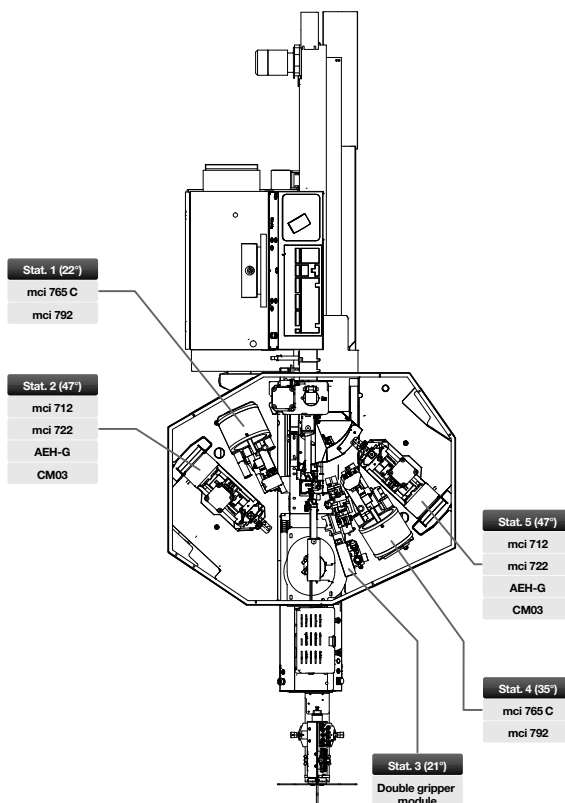
The stripping quality check (SQC) entails visually monitoring the stripping quality during the swivel movement. It measures the stripping length and checks the wire for projecting or splayed wires. The use of the SQC instead of the CPS option („cut pulled strands“) boosts the output by an average up to 10 percent. The actual figure depends on conductor length and quality. Defective products are automatically removed.

Your benefit

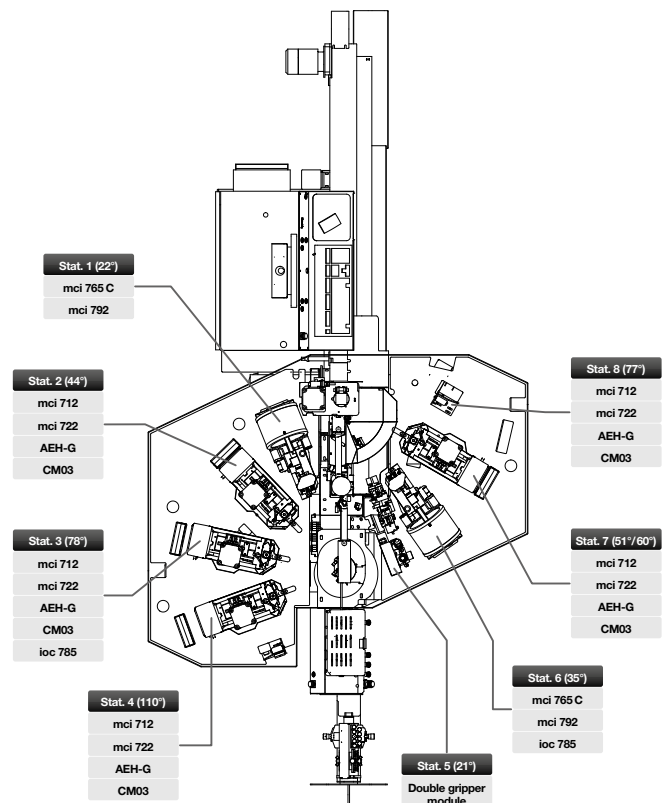
- Highly flexible with up to five or seven process modules
- Integration of standard and customer-specific processes possible
- Conductor detector sensor for highest quality in cutting
- Integrated quality measurements
- Create the next job while the machine is running
- Can be integrated in a network with WPCS interface

Choice of standard configurations




















Alpha 355 S



Alpha 356



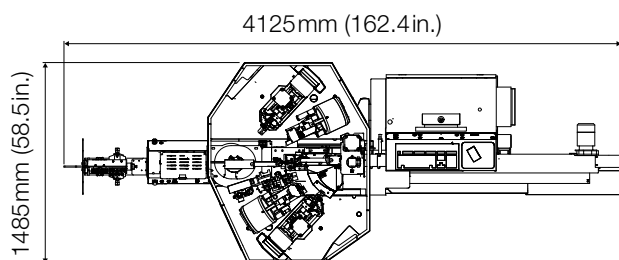
Application sample Alpha 355 S/356

Cutting		Core processing	
Half stripping		Double sheath / Coaxial and triaxial cables	
Full stripping		Ferrule crimping	
Intermediate strip		MIL crimping	
Twisting / Tinning	 Alpha 356	Wire end solidifying / Splicing / Welding	
Crimping		Hot stamp marking	 Komax G Hot stamp
Seal insertion		Inkjet marking	 Komax G Ink Jet
Split cycle for closed barrels			
Double crimping	 Alpha 355 S  Alpha 356		
Sleeve insertion	 Alpha 355 S  Alpha 356		

Options and Accessories

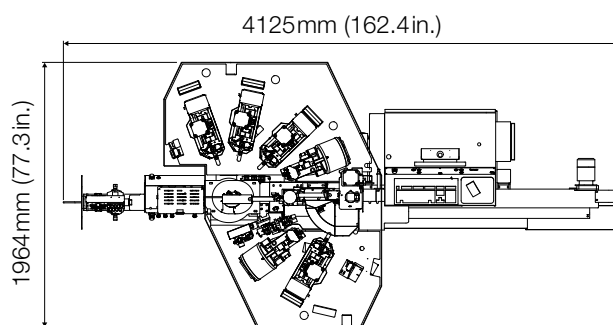
Feeding systems	Komax 106 ads 117 ads 119
Marking systems	Komax 26 hot stamp marker Komax Inkjet marking system IMS Laser marking on request
Wire infeed	Belt drive
Processing modules	Crimping module mci 712 Crimping module mci 722 (with programmed crimp heights) Seal module mci 765 C (with seal position monitoring SPM) Twisting module mci 782 Tinning module ioc 785 Sleeve module mci 792 Double gripper module Ferrule module AEH MIL-crimping module Welding module Ultrasonic compaction
Quality control	Integrated crimp height measurement Integrated pull-off force measurement Conductor detector sensor ACD Strip quality check SQC Crimp force analyzer CFA/CFA+ Material change detection Material verification Wire length correction Splice detection Spark tester Seal position monitoring SPM/SPA Terminal end detection
Deposit systems	Basic module 2m (78.7in.) or 4m (157.5in.) Extension module 2m (78.7in.) or 4m (157.5in.) Deposit gripper
Accessories	Crimp tool quick-change system (355S) Automatic guide tube changer (355S) Barcodescanner
Software	Networking WPCS Data conversion TopConvert Manufacturing execution system KomaxCAO

Machine layout Alpha 355 S



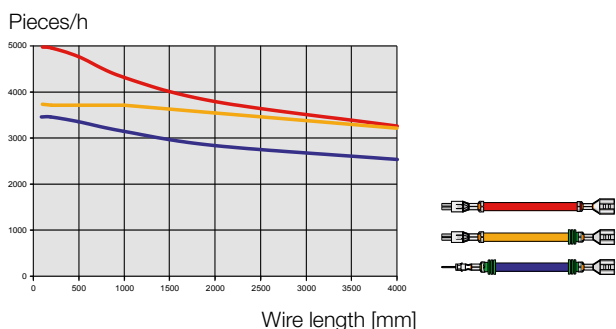
Height with cover closed: 2000mm (78.7in.)
 Height with cover open: 2900mm (114.2in.)

Machine layout Alpha 356



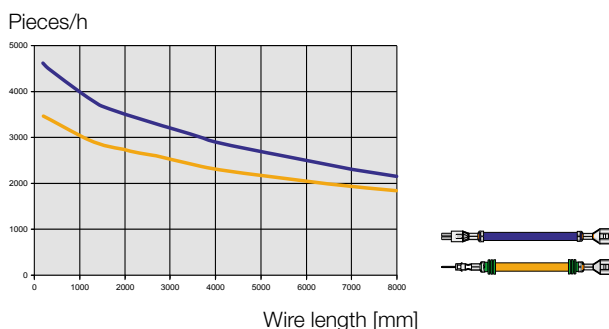
Height with cover closed: 2000mm (78.7in.)
 Height with cover open: 2900mm (114.2in.)

Reference values for piece output of Alpha 355 S



Conductor: FLYR 0.50mm² (AWG20)
 Pneumatic pressure: 6bar (87psi)
 Speed: 12m/s (39ft/s)
 Acceleration: 60m/s² (197ft/s²)
 Crimp module: mci 722
 Seal module: mci 765 C
 Quality monitoring: active

Reference values for piece output of Alpha 356



Conductor: FLYR 0.75mm² (AWG19)
 Pneumatic pressure: 6bar (87psi)
 Speed: 10m/s (33ft/s)
 Acceleration: 50m/s² (164ft/s²)
 Crimp module: mci 722
 Seal module: mci 765 C
 Quality monitoring: active

Technical data

Length range	60mm–65000mm (2.36in.–213ft.) Optionally 30–60mm (1.18in.–2.36in.)
Length accuracy	Repeat accuracy: ±(0.2% +1.0mm (0.04in.))
Stripping lengths	0.1mm–35mm (0.004in.–1.38in.)
Stripping lengths with partial strip	47mm (1.85in.) on side 1 35mm (1.35in.) on side 2 Optionally up to 80mm (3.15in.)
Wire cross-sections*	0.22mm ² –6mm ² (AWG24–AWG10) Optionally 0.13mm ² (AWG26)
Wire infeed speed	max. 12m/s (39ft/s)
Noise level	<80dB (no crimping module)
Electrical connection	3×208–480V / 50–60Hz 5kVA
Pneumatic system	5–8bar (73–116psi) 9m ³ /h (318ft ³ /h)
Weight incl. crimp and seal modules	Alpha 355 S: ca. 1300kg (2866lb.) Alpha 356: ca. 1400kg (3090lb.)

* Extremely hard and tough wires may not be able to be processed even if they are within the above cross section range. If you are in doubt about your wires, we are happy to process samples of them.

More information about our products:



www.komaxwire.com

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