SIGMA 588

Fully automatic twisting machine

komax

EN

SIGMA 588

The Sigma 588 is the first stage of fully automated twisted cable production, designed for high-volume manufacturing. It offers a comprehensive suite of features, including crimping, sealing, and the full range of Q-Tools with the user-friendly Komax HMI.

The Sigma 588 produces unshielded twisted pair (UTP) wires, essential for the automotive industry, by twisting two individual wires together. The modular machine structure allows for upgrades with up to one crimp and one seal modules per side.

The machine can be adapted to customer-specific needs through various processing sets. It handles wire cross-sections from 0.22 to 2.5 mm² with the required quality.

The intelligent and fully automated integrated adaptation of the wire position for open ends enables highly efficient production with open end lengths from 40 to 99 mm.

Product Highlights

- High-speed, automated processing for high-volume production with minimal operator intervention
- Widest processing range in wire length and wire gauge, and on-site adaptable to your needs (changeable gripper system)
- Highest output per square meter production space
- Automated adaptation and configuration of open ends per product for maximum performance
- Stable and reliable production

Easy to use – short learning time

Thanks to the intuitive Komax HMI user interface, your new employees will be able to find their way around in no time. It has programmable workflows that guide the operator through the process in a targeted manner. Individual dashboards provide a clear overview of machine functions. Set-up directly at the machine is even more efficient thanks to the optimized operating concept of the Sigma 588. Training solutions support employee onboarding and ongoing development. This ensures a productive working environment during operation and maintenance.

Proven quality at the highest OEM level

The Sigma 588 meets the requirements of your customers with unique quality monitoring and innovative solutions for automation and networking. With the introduction of the Komax Q1250 quality tool range on the Sigma family, operator influence is minimized, and process monitoring is automated to support the zero-fault strategy. Furthermore, our service experts will assist you in continuously improving your production and reliably implementing even the most stringent requirements.

Variable open Ends VoE

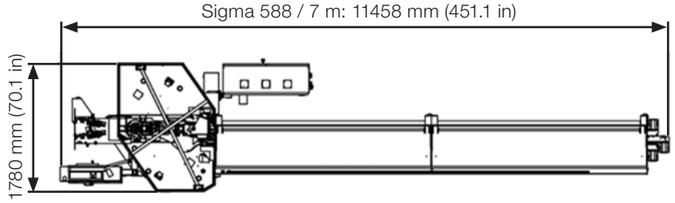
With the intelligent and integrated processing set “VoE Variable open Ends” the machine is capable of calculating and adjusting automatically the setup per article. Any article definition of open ends can be achieved with the highest output, even with the smallest wire overhang during wire end processing. Customers are able to change gripper systems on-site to meet their needs.

Technical data

Wire cross section*	2 × 0.22 mm² – 2 × 1.0 mm² (AWG 24 – AWG 17) with processing set VoE 8-8 2 × 0.22 mm² – 2 × 2.5 mm² (AWG 24 – AWG 14) with processing set VoE 8-15 Optional with feasibility test from 0.13 mm² (AWG 26)
Length range**	700 – 4000 mm (27.6 in.– 157.5 in.) 700 – 7000 mm (27.6 in.– 275.6 in.) Optional from 150 mm (5.90 in)
Length accuracy	± (0.1% + 1 mm (0,04 in.))
Strip length	Side 1: 0.1 – 18 mm (0.004 – 0.7 in) Side 2: 0.1 – 28 mm (0.004 – 1.10 in)
Open wire ends** (data with MQS 6.4 contact processing)	40 – 99 mm (1.6 – 3.9 in) with processing set, variable open end (VoE 8-8) 50 – 99 mm (3.0 – 3.9 in) with processing set, variable open end (VoE 8-15) - max. 125 mm open ends Side 1 with unequal open end option
Pitch length	5 – 80 mm (0.2 – 3.2 in) programmable Accuracy: ±10%, max. ±4 mm (0.16 in)
Max. number of processing stations on side 1/ side 2	2/2 (crimp – seal / crimp – seal) Q1250 does not need a process station place
Noise level (without crimp tool)	<80 dB
Electrical connection	3×208–480 V / 50–60 Hz, 10 kVA
Compressed air connection	5 – 8 bar (73 – 116 psi)
Recommended operating pressure ***	6 ±0.5 bar (87 ±7.25 psi)
Weight (incl. 2 crimp modules and 2 seal modules)	approx. 2370 kg (5225 lb.)

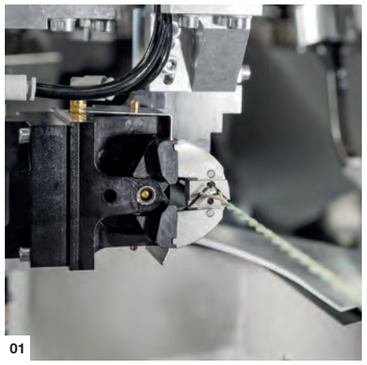
* Certain extremely hard, tough wires may not be able to be processed even if they are within the indicated cross-section range. If in doubt, we are happy to provide you with samples of your wires.
** Producible parameters are dependent on pitch, outer diameter and end processing. Producibility must be tested using the software producibility check or a feasibility test.
*** Peripheral devices may not function properly outside the recommended operating pressure. Please also observe the technical data for peripheral devices. The maximum permitted operating pressure is determined by the ambient temperature: 6.5 bar up to 40°C / 6 bar above 40°C

Sigma 588 / 4 m: 8463 mm (333.2 in)
Sigma 588 / 7 m: 11458 mm (451.1 in)



Height with closed cover: 1,985 mm (78.1 in)
Height with cover completely open (maximum opening): 2,965 mm (116.7 in)

01
Holding Gripper Variable open Ends VOE
02
Q1250 does not need a process station place
03
Long and unequal open ends.


01


02


03

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