

Press release

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New: Compact vacuum pyrolysis system ideal for production of plastic medical products

SCHWING Technologies cleans small tools and machine parts

In hospitals and medical practices, billions of sterile-packaged disposable plastic syringes are used, then disposed after only a single use. They are typically manufactured by injection moulding polypropylene using small metal nozzles and nozzle rings. These approximately 6- to 7-cm long machine parts must be cleaned regularly. Engineers at SCHWING Technologies have developed a new small-format vacuum pyrolysis system for these components and other tools. VACUCLEAN COMPACT system is particularly suitable for the thermal removal of plastic from small tooling to a maximum loading capacity of 50 kg. The fully automatic process is safe and gentle, requiring about six to eight hours for vacuum pyrolysis and oxidation cycles at a maximum temperature of 450 degrees Celsius.

Lightweight and compact system

The unit weighs only about 750 kilograms and, with its 100 x 125 x 245 cm (W x D x H) dimensions, is only slightly larger than a spacious refrigerator. All essential components are integrated into the interior of the system to save space: these include a catalytic converter line, a vacuum pump, a control cabinet and fittings – featuring a 50 x 50 x 35 cm (W x D x H) cleaning chamber including loading platform. A touchscreen panel makes the control of the system easy to operate. Thanks to an external tower light, users always have a clear view of the cleaning status, even from a distance.

Thermal cleaning: energy efficient and environmentally friendly

With the new, electrically operated and easy-to-install system, the SCHWING engineering team is responding to the increased international demand for more compact systems, which will greatly benefit manufacturers of plastic medical products. The small-format system operates

energy efficiently and environmentally friendly with low emissions. Additional advantages for producers of medical plastic products: Shorter machine downtimes and an increased service life of the cleaned components not only saves time but also reduces costs.

Keywords: Medical production, plastic medical products, VACUCLEAN COMPACT, vacuum pyrolysis system, thermal cleaning, polypropylene, plastic removal, tool cleaning, machine part cleaning, nozzles, nozzle rings, tool forms, injection moulding

About SCHWING Technologies

SCHWING Technologies has been operating for over 50 years and is the worldwide technological leader for high-temperature systems for thermal cleaning, thermo-chemical finishing and heat treatment of metal parts and tools. Managing directors are Ewald Schwing, Thomas Schwing and Alfred Schillert. The owner-managed company designs, manufactures, and operates systems at its headquarters in Neukirchen-Vluyn in Germany's Lower Rhine region. Built upon the achievements of German engineering, the medium-sized business is globally the best-known specialist in the removal of plastics. Among SCHWING's approximate 2,500 international clients are companies from the plastics and fiber industries, as well as from the chemicals and automobile sectors. For every cleaning need, the company with its approximately 80 employees offers the most economically, ecologically and qualitatively best technology and cleaning solution. SCHWING is also a reliable service partner for contract cleaning by processing more than 250,000 tools and parts each year to the highest environmental and qualitative standards. Founded in 1969, the company celebrated its 50th anniversary in 2019 and opened SCHWING Technologies North America Inc., a new sales company in the USA, in that year.

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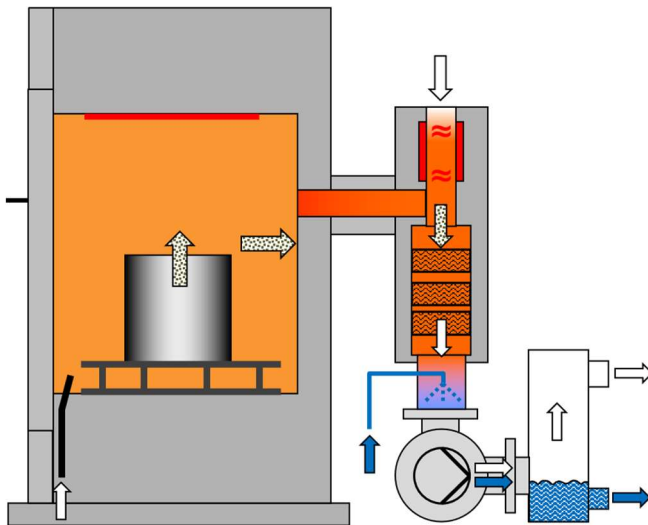
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The compact and fully automatic vacuum pyrolysis system is particularly suitable for thermal plastic removal of smaller tools with a maximum loading capacity of 50 kilograms part weight. This also includes small metal nozzles and nozzle rings for the production of disposable plastic syringes.

Photo Credit: SCHWING Technologies

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Functional principle of the compact and fully automatic vacuum pyrolysis system. The cleaning process takes about six to eight hours and removes plastic safely and gently at a maximum of 450 degrees Celsius using vacuum pyrolysis and oxidation.

Photo Credit: SCHWING Technologies

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Disposable plastic syringes are produced by injection moulding using small nozzles and nozzle rings. The metal workpieces used in production can be quickly and safely freed from adhering polypropylene residues by thermal cleaning.

Photo credit: SCHWING Technologies

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