PRESS RELEASE

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New Needle Gripper Series from Tectra Automation

Industry leader in the supply of automation solutions Tectra Automation, part of the Hytec Group of Companies and South African distributor for vacuum specialist Schmalz, has introduced Schmalz's expanded needle gripper series SNG with the variants SNG-AP (pneumatic) and SNG-AE (electrical) to the South African market. The new grippers are ideal for handling lightweight, thin and non-rigid materials such as composite textiles, as well as fleeces, filter materials, insulation materials and foams.

The intersecting needles on the SNG-AP and SNG-AE needle grippers create a powerful holding force even with highly unstable workpieces. The gripper inserts several needles into the material in opposing directions, ensuring the workpiece is held securely in the correct position without being damaged. Minimised effective areas mean that even very small parts can be reliably moved. When it comes to removing the workpiece, the needles are retracted and a blow-off function ensures fast depositing. The grippers themselves weigh very little, thus allowing short cycle times. Available with needle strokes of 3, 10, and 20 mm and needle diameters of 0.8 or 1.2 mm, the Schmalz grippers can be adapted to the requirements of each individual workpiece.

Electrical

The SNG-AE variant is an electrically driven gripper. Its needle stroke can be changed for each individual cycle allowing any stroke sequence to be implemented. This ensures maximum process flexibility and makes rapidly changing automated tasks, such as handling individual layers or entire stacks, possible. It features an IO-Link interface, via which the gripper communicates with the higher-level controller and provides complete condition data. This not only allows continuous stroke monitoring but also comprehensive process control which, in turn, enables ongoing process optimisation. Furthermore, standardised plug connections simplify the installation process: The necessary cables are simply plugged in, eliminating the need for complex wiring of single conductors.

Pneumatic

The needle gripper SNG-AP incorporates a central pneumatic drive with double-acting pneumatic cylinder. The needles are extended and retracted synchronously, reducing the need for hoses and couplings. An adjustment wheel with a scale enables continuous, simultaneous stroke adjustment, thereby ensuring minimum start of operations and set-up times. It is also possible for the SNG-AP to be fitted with a sensor to provide information on the end position of the needle.

Maintenance

The extremely robust housing has a lightweight design and on both the SNG-AE and the SNG-AP, the needles are quick to clean without the need for tools, and can be changed simply and efficiently.

Experts estimate that the market for composites will continue to grow and that lightweight designs will become increasingly important. This increases the requirements for the manufacturing processes, particularly handling of composite textiles, for example in the automotive industry. According to the German Federation of Enforced Plastics (Industrievereinigung Verstärkte Kunststoffe), these challenges can only be met with increased automation. Schmalz' newly developed needle grippers are pioneers in this field.

ENDS

Photo: PR TEC 3804_Needle Gripper
Caption: The intersecting needles on the SNG-AP and SNG-AE needle grippers create a powerful holding force even with highly unstable workpieces.

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PR: PR TEC 3804 Needle Gripper Series from Tectra