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塑料管材领域的创新

Innovations in the Field of Plastic Pipes

Sica公司推出了多种多样的技术创新:采用节能、节省原料和节省成本设计的“绿色”塑料管材设备。

RoboJack 250 机械手管材堆垛机:适用于带或不带承插口的PVC, PE和PP管材的自动堆垛机, 管材外径32-250, 长度1米到6米, 可同时在带有木质支架的推车上堆码两种不同长度的管材。这台设备配备了管材储存仓和人性化的机械手, 承担管材处理单元的任务, 即使管材旋转时可用的空间极为狭小, 也可以将托盘上各层承插口的位置交替摆放。

Flash450 薄膜缠绕机:自动缠绕包装PVC、PE和PP波纹管, 管直径从8到25mm, 短长度卷取并用拉伸膜包装。缠绕机有三个盘绕轮, 带有中心调节控制, 薄膜分配电子张力控制, 通用薄膜切割系统和几何形状可变的盘管卸载装置。设备配备了无线通讯系统以控制主要的卷管功能。

TRS 160 W 无尘锯:可以切割任何PVC、PP和PE塑料原料制成品, 倒角而不需要去除物料。采用这一方法, 可以显著地节省大量原料, 而原料占到了管材成本的80%, 与此同时, 避免了碎屑抽吸和回收带来的麻烦。一般传统的切割机, 都采用切刀或刀具, 即使采用了抽吸装置, 也会有一部分碎屑和粉尘堆积在切割机的构件之间, 为此, 所需要的维护工作量增加了。与此相反, 新型TRS 160 W 采用创新系统(专利申请中)解决了这一问题, 保证了既清洁而又完美垂直地用切刀切割, 同时能够精确地按照要求进行倒角, 保持相同的生产效率和符合要求的速度, 满足现代化挤出生产线所提出的要求。

Unibell1 200JRE PVC压力管扩口机:自动在线扩口机带有一台IR-SW(短波长-红外线)加热炉, 用于平滑实壁硬质PVC管或多层管, 管外径32到200mm, 长度0.5到6米外加承插口。设备采用机电、电气和气力驱动, 电气操作屏带



有PLC控制器。对于所有直径的管材, 采用单腔外部压力成型, 采用预先冷却过的压缩空气对承插口进行冷却, 并通过内部制冷循环对压缩空气进行冷却(Sica的专利)。扩口机可以成型平滑的溶剂粘固剂承插口, 带机械芯棒系统垫圈座的承插口以及带有整体垫圈的承插口(Rieber系统), 配有全套垫圈储存仓及将密封环装载到芯棒上的系统(Sica专利)。

Multibell 200M PVC排水管扩口机:高生产效率, 采用旗舰版本设备每小时可生产高达900个承插口。与原有的机型相比, 这一新机型在大幅度降低了价格的同时, 引入了大量的特色技术, 机器和设备具备了大量新的优点, 例如在相同的生产效率下尺寸更为紧凑, 适用于多种管材承插口的革命性的系统, 易于使用和可以快速转换规格等。机器仍然完全采用气动, 而不采用液压单元, 这样一来, 设备就具有了相应的优势, 具备高度洁净的特点, 且非常易于维护管理。由于采用了全套可移动式机器工作台, 因此可以满足新推出的关于易接近性的重要标准:这台设备能够让工作者完全地和接近需要设置的主要区域, 能够促进和加快生产规格转换的进程。



Sica presented a wide-ranging innovation: "green" plastic pipe machines designed to save energy, materials and costs.

RoboJack 250 – Robotic pipe palletizer: Automatic palletizing station for PVC, PE and PP pipes, with or without sockets, OD 32-250, 1 m to 6 m in length, for the



scrap suctioning and recycling. In traditional cutting machines, also in those with knife or tool, chips and dust end up partially between saw mechanisms despite suctioning; for this reason, the necessity of maintenance increases. In contrast, the new TRS 160 W removes the problem with an innovative system (Patent Pending) that guarantees not only a clean and perfectly perpendicular cut with knife but also a precise and well-defined chamfer, maintaining the same productivity and a satisfactory speed; these are requirements for modern extrusion lines.

Unibell1 200JRE – PVC pressure pipe belling machine: Automatic inline belling machine with one IR-SW oven for PVC-U smooth solid-wall or multilayer pipes with O.D. 32 mm to 200 mm and for lengths from 0.5 m to 6 m plus the socket. Machine with electro-mechanical, electrical and pneumatic drives; with PLC controlled from an electrical panel. Forming by external pressure in a single chamber for all pipe diameters and socket cooling by compressed air pre-cooled by an internal refrigeration cycle (Sica patent). The belling machine can form smooth solvent-cement sockets, sockets with gasket seats with a mechanical mandrel system and sockets with integral gasket (Rieber system), complete with gasket magazine with system for loading the ring seals on the mandrel (Sica patent).



Multibell 200M – PVC sewage pipe belling machine: High productivity per hour up to 900 sockets/hour with the flagship version. This new machine, compared to the previous version, introduces numerous technical features in view of a greatly reduced price both of machine and equipment and a lot of new advantages such as more compact dimensions with equal productivity, revolutionary system for multi-socketting pipes, ease of use and quick format change. The machine is still completely pneumatic, with the inevitable advantages related to the higher cleanliness and the superior ease of management thanks to the absence of the hydraulic unit. New important accessibility standards have been achieved with the introduction of a completely movable machine bench: the solution allows complete and safe access to the main areas required for set-up in order to facilitate and accelerate the format change phases.

simultaneous palletizing of two different pipe lengths on carts with wooden frames. The station is equipped with a pipe magazine and an anthropomorphic robot serving as the pipe handling unit, capable of alternating the position of the sockets in the pallet layers even with minimal area available for rotation of the pipe.

Flash 450 – Film coiler: Automatic coiler for packing corrugated PVC, PE and PP pipes, with diameters from 8 to 25 mm, in short length coils covered with stretch film. The coiler has three reels with centralized adjustment controls, a film dispenser with electronic tension control, universal film cutting systems and variable-geometry reel unloading device. The machine is equipped with a wireless communication system for control of the main reel functions.

TRS 160 W – Swarfless saw: It can cut any PVC, PP and PE plastic material and chamfer without removing material. This manages to save a considerable quantity of raw material that affects the 80% of the pipe cost, but also to avoid problems of

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