



THANKS TO OUR SIXTH SENSE WE FIND THE ESSENCE OF THINGS, WHICH LEADS TO OUR SUCCESS.

MODULAR TECHNOLOGIC EQUIPMENT (MTE)

Product Equipment – Venipuncture and Injection



With their modern design adapted for specific conditions of the medical industry, the modular equipment is intended for the production and completion of disposable medical supplies. Our equipment meets the requirements of the Good Manufacturing Practice, including the preparation of the equipment's validation documents. The equipment complies with the requirements for technological devices intended for use in a sterile environment according to ISO 14 644.

CLASSIFICATION BY VERSIONS:

- Sequence rotary equipment (carousel)
- Asynchronous linear equipment
- Synchronous linear equipment

CLASSIFICATION BY PRODUCTS:

- Assembly of syringes
- Assembly of injection needles
- Completion of transfusion and infusion sets
- Cutting, unwinding/winding and completion of hose systems

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2. AUTOMATIC ASSEMBLY EQUIPMENT FOR INJECTION NEEDLES (MTE-JE)

The modular design guarantees high performance and process stability. Retuned assembly stations, know-how and innovations can be employed to adapt the equipment to individual customer requirements.

OVERVIEW OF POSSIBLE OPERATIONS:

- loading of a hub
- checking the hub for presence
- loading of a needle
- hub rotation to the correct position
- application of adhesive
- adhesive curing
- tensile tests
- camera inspections
- application of silicone
- drying
- throughput test
- cover installation
- check and cover position
- component unloading, etc.

NEEDLE TYPES:

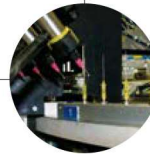
blood needles, solution administration needles, insulin needles, veterinary needles, double-sided needles, atypical needles.



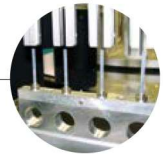
Sequence rotary equipment MTE-JE



Hub rotation to the correct position



Adhesive application



Needle cap application

3. COMPLETION EQUIPMENT FOR TRANSFUSION OR INFUSION SETS (MTE-TS)

The basic element is the conveyor pallet system. The equipment may include automatic dosing and hose cutting, gluing station, automatic solution filling, automatic checks of individual production and assembly processes, automatic packaging of sets, and so on.



Transfusion set completion and filling equipment



Automatic conveyor system, manual assembly of bags



Robotic filling of bags with solution



Automatic dosing and hose cutting

4. EQUIPMENT FOR CUTTING, UNWINDING, WINDING AND COMPLETION OF HOSE SYSTEMS (MTE-HS)

4.1 HOSE CUTTING, UNWINDING/WINDING EQUIPMENT

Single-purpose equipment specialised for the cutting of hoses of various material diameters, hardness, and type.

The equipment is suitable for the cutting of the materials below:
PE, PA, PUR, PVC, PTFE, and so on.

The equipment can be integrated into the storage area of the assembly line with emphasis on a good operation ergonomics, easily replaceable coil, and simple equipment servicing.

Operator panel provides the cutting equipment with an unlimited setting variability of the hose cut quantity and length.



Simple HMI - Touch Screen user interface



Simple replacement of a coil



Simple service of the cutting equipment

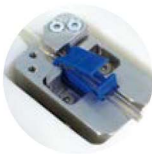
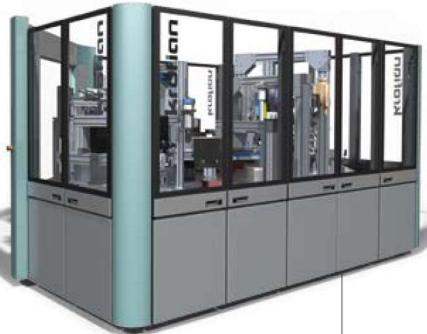
4.2 HOSE SYSTEM ASSEMBLY EQUIPMENT

The product series has been developed for the completion of hose systems. The equipment allows for:

- assembly of transmission systems
- assembly of extension hoses
- assembly of connection hoses
- assembly of transfusion and infusion sets
- other assemblies of hose systems

The equipment is capable of processing the hoses of various materials, diameter, hardness and length that can be optionally adjusted from the operator touch panel.

The equipment can also be conveniently integrated into the production lines.



Component mounted to the hose with accurate production length



Automatic supply of hose with empty coil detection



Automatic supply of hose with empty coil detection



Automatic robotic handling of set

1. AUTOMATIC ASSEMBLY OF SYRINGES (MTE-ST)

MTE-ST technology is developed to process a wide range of syringes with the emphasis on quality and high productivity. MTE-ST equipment is designed as a modular system with a basic concept of the cells being intended for a sterile environment. The system layout can be altered to conform with various product applications.

Product Line: MTE-ST equipment		Sequence rotary equipment	Asynchronous linear equipment	Synchronous linear equipment
		EcoLine	SpeedLine	PowerLine
Two-component syringes	Basic	■	■	
Three-component syringes	Advanced	■	■	
Multi-component syringes	Multi	■		■
Syringes and injection needles	Complex	■	■	■
Speed [pcs/min]		10–30	150–250	180–300

ADVANTAGES OF MTE-ST EQUIPMENT:

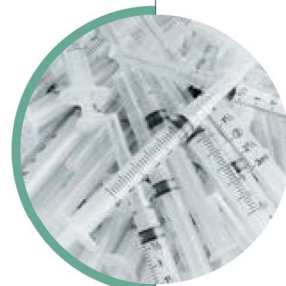
- verified speed and accuracy
- high quality and stability of the OEE production process
- modular system of the equipment design allows for
 - quick equipment design and shorter delivery interval
 - reliable and long-term operation
 - integration of further assembly stations
- version for sterile environment according to ISO 14644:
 - application of materials harmless to health
 - separated stations for individual assembly processes
 - design of components and execution of surface finishes makes adherence to the occupational standards easier
- intuitive control – HMI – Touch Screen user interface



MTE-ST Speed and Power Line



MTE-ST ECO Line



EQUIPMENT FOR STERILE ENVIRONMENTS

K-MODULE – THE EQUIPMENT'S BASIC ELEMENT

- verified stability and robustness of the basic frame
- modular system
- modern industrial design
- noise emission reduction
- limited risk of unauthorized access
- shortened erection and installation time
- ergonomic layout

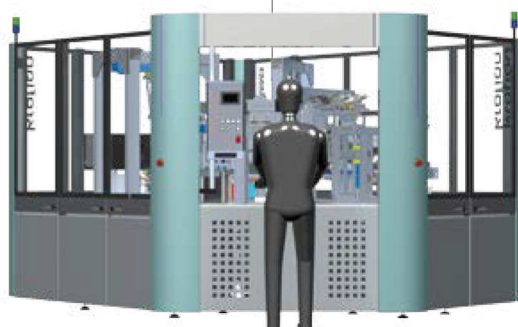
WIDE FIELD OF APPLICATION

- sequence rotary equipment (carousel)
- asynchronous linear equipment
- synchronous linear equipment

SYSTEM LAYOUT GUARANTEES:

- high productivity and process stability
- easy cleaning and maintenance
- simple optimization or reconstruction of the equipment
- intuitive control

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Krofián CZ spol. s r.o.
Dobranov 78, 471 21 Ceska Lipa
Czech Republic
www.krofián.cz
hotline: +420 487 882 288

KROFIÁN GmbH
Askay 20, 574 39 Attendorf
Deutschland
www.krofián.de
hotline: +49-2722-635 8220