

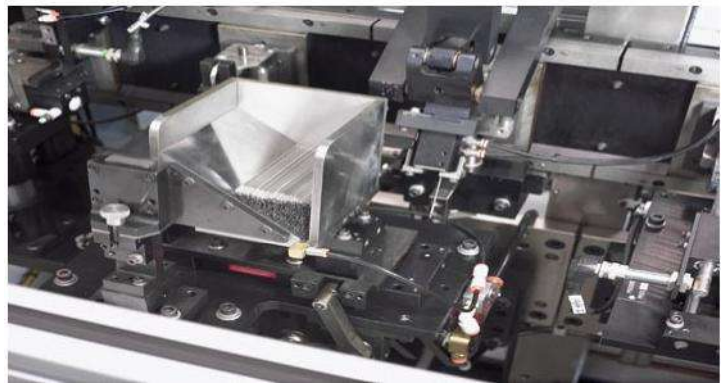
Catheter Assembly

A large medical product design firm has determined that it will introduce a new "safety" Catheter to the marketplace. This is in response to legislation and a market recognition of the need for medical products which do not threaten the health care provider with undo risk of infection. The Catheter's design incorporates a protective sheath and a retractable needle (Cannula), insuring that the individual introducing the Catheter into the patient's vein, does not accidentally get stuck by an infected device. The risk of HIV, Hepatitis C, etc. have created the need for such medical product redesign. The safety features result in a more complex assembly process with more components than a standard traditional Catheter.



System Overview

The entire product was assembled on one Bodine indexing carousel assembly module. Bodine was selected because the customer knew of Bodine's experience with Catheters and the related assembly processes. The assembly module was 9 bays in length, providing 54 possible operating stations, 42 of which were actually used in this case. The product consisted of 9 components and (2) different gages of Cannula had to be handled. Operating at 30 cycles per minute, the system had a gross production rate of 1800 assemblies per hour. The system was operated in a class 10,000 clean room. Extensive use of sophisticated vision systems assured Needle grind quality and ultimate Cannula radial orientation.



System Values & Benefits

- Clean room operation
- Fully automated assembly process....no human contact during assembly
- High production volumes...gross production rate of 14,400 assemblies per 8 hour shift!

System Highlights

Assembly process highlights included:

- Auto cannulas loading, adjustable to two different gages (see photo)
- Automatic feeding of all components
- Extra space on machine to accommodate future product variations
- UV curing of Loctite adhesive (used to glue Cannula to Hub) PLC based control system with remotely monitored HMI and Webnet remote reporting system
- Lubeless clean room tooling
- Full verification of all assembly processes and critical dimensions
- Automated bagging of finished product prior to final sterilization process.