

On the FOREFRONT

A Quarterly Compilation of Outsourcing Best Practices and Case Studies

First Quarter 2024

Volume 9, Issue 1

Inside this issue:

Mexico Fitup

2

A Global Solution to Shortening the Supply Chain



A Global Solution: Asia, UK, North America

ONE SOURCE
Medical Design & Contract Manufacturing



Singapore



Changzhou, China



Kington, UK



Juarez, Mexico
(2024)



Xiamen, China

A key lesson of this decade has been that shorter supply chains add flexibility to support varying market demand. They also reduce logistics costs and the inventory pipeline otherwise tied up in transit or “just in case” regional warehousing. Comparatively, some regions offer significant cost labor advantage. Ignoring that strategy for price-sensitive products can cost market share. There is middle ground. When manufacturing is outsourced to a supplier with a global footprint, it is easier to develop regional outsourcing strategies that make sense for specific market characteristics such as local content requirements, cost sensitivity, degree of demand variability and dominant market location.

Forefront Medical Technology, whose facilities are located in North America, Asia and the United Kingdom (UK), provides its customers with the benefits of regional manufacturing options, significant design and commercialization expertise, standardized key processes, and vertically integrated fabrication capabilities.

Benefits of using a global contract manufacturer include:

- Ability to leverage resources in lower labor cost areas globally

- Access to a broader set of vertically-integrated manufacturing capabilities
- Simplified logistics
- Ability to evolve strategy over time.

One of the benefits of technological advances in videoconferencing and collaborative computing is that resources no longer need to be replicated in all facilities.

Headquartered in Singapore, Forefront Medical leverages its engineering expertise in its US technical center, and Mexico and UK manufacturing facilities with its engineering resources in Singapore and China. Standardized systems and processes help ensure continuity among teams.

As a vertically integrated contract manufacturer, Forefront Medical’s team is able to evaluate multiple manufacturing technology options, making design recommendations based on the optimum technology for the product’s form, fit, function and cost requirements.

(Continued on page 3)

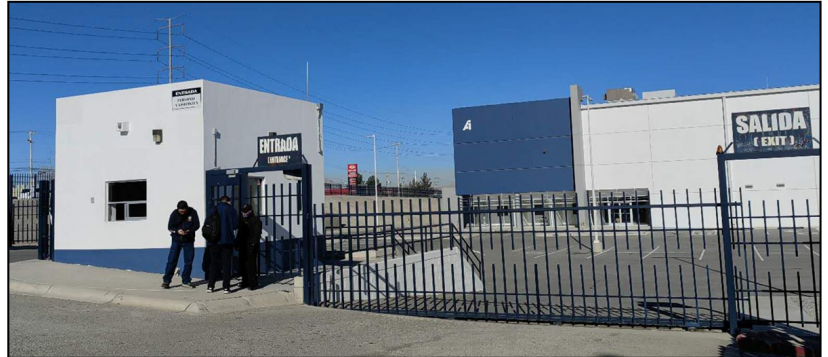


A Global and Flexible Medical Manufacturing Solution

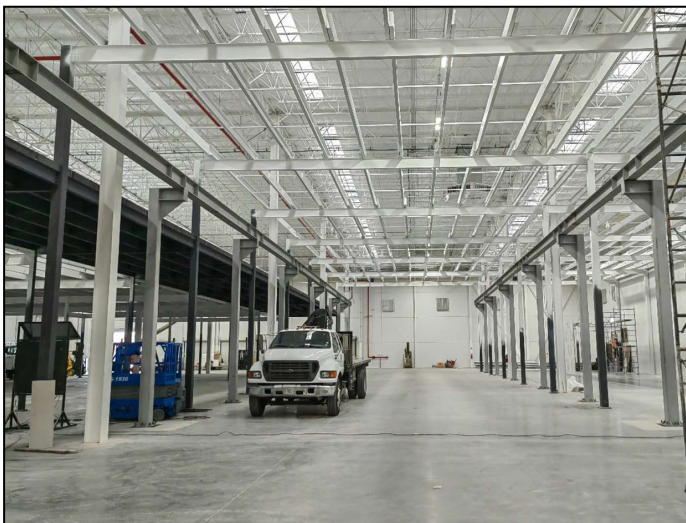
Forefront Medical's facility in Juarez, Mexico is in its fit-up phase. The 68,000 sq.ft. facility is minutes from the U.S./Mexico border.

Facility fit-up is in progress and production qualification is scheduled for the middle part of 2024. Capabilities will include injection molding, extrusion, clean room assembly and packaging, and automated high volume production.

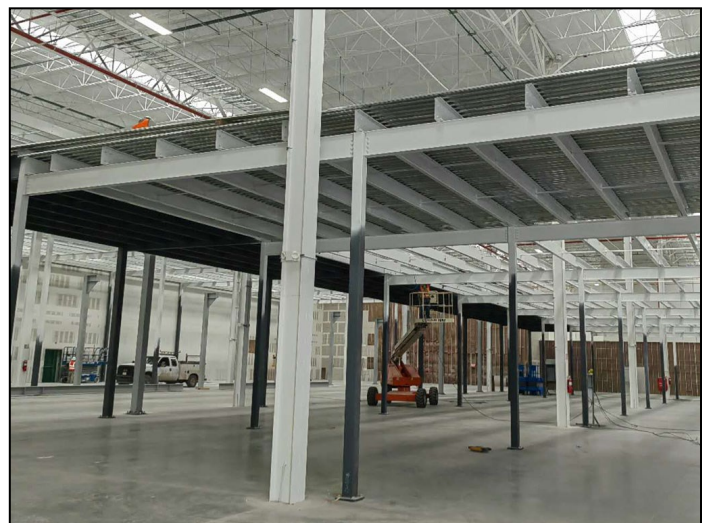
These photos show the fit-up activities in progress.



Access to the building is controlled by a contract security team.



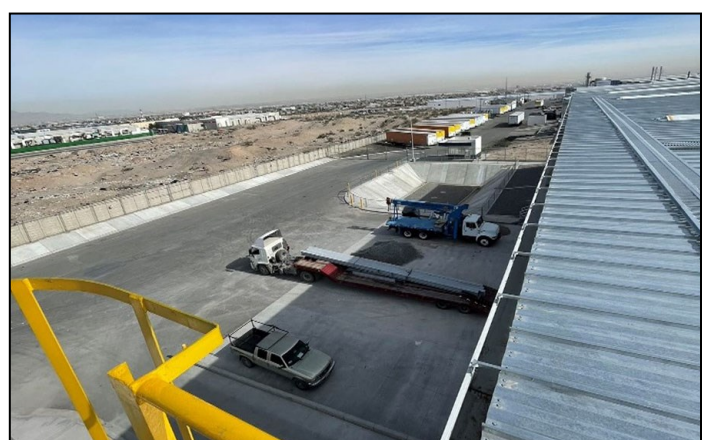
The transfer room and crane structure is being installed into the injection molding cleanroom area.



Roof fitting is underway for the assembly cleanroom and packaging room.



HVAC systems are installed on the roof.



The loading dock area as viewed from the roof.

On the FOREFRONT



A Quarterly Compilation of Outsourcing Best Practices and Case Studies

Forefront Medical Technology focuses exclusively on the medical device industry and thoroughly understands the needs of this market. As a specialty contract manufacturer with a focus in disposable diagnostic, drug infusion and medical device systems, Forefront Medical has extensive expertise with injection molding, extrusion, assembly and packaging of specialty medical disposable devices. In addition, Forefront Medical Technology's technical expertise extends into collaborative product design and development, rapid SLS prototyping, in-house tool making and isolated clean rooms for manufacturing, assembly and packaging. Capabilities also include sterilization and global logistics to provide one integrated source for the total supply chain. This world class supplier has the expertise to custom design a new product... or redesign the current one...from a conceptual drawing into a completely manufactured, packaged and sterilized product, ready for global shipment.

USA: Business Development & Technical Sales Office
Farmington, CT 06034-1234
Phone: (860)-830-4637
www.forefrontmedical.com

Arrow Medical Limited
Hatton Gardens,
Industrial Estate,
Kington Herefordshire
UK HR5 3RB
Phone: +44(0)1544 231760
www.arrowmedical.co.uk

Global Solution

(Continued from page 1)

Integrated Product Development Process... from Concept to Finished Device

Forefront Medical's capabilities within Asia include Selective Laser Sintering (SLS) and Multi-Jet Modeling (MJM) systems, injection and blow molding, extrusion, metal fabrication, electromechanical assembly, and clean room assembly capabilities.

Forefront Medical's capabilities in Juarez, Mexico include injection molding, extrusion, clean room assembly and packaging, and automated high volume production.

Its Arrow Medical subsidiary in the UK offers manual and semi-automated assembly and sterile packaging of instruments and critical devices in three class 7 cleanrooms. The Company also



multi-layer laminations, pressure testing and process validation. While not all capabilities are resident in all facilities, Forefront has the ability to become an

internal supplier of fabricated parts to a different facility without those fabrication capabilities or utilize existing expertise to rapidly add the capability to that facility. Selecting a contract manufacturer with global capabilities provides an ability to regionalize strategy and shorten the supply chain. It also facilitates a strategy that can evolve over time with a partner who can help outline the costs and benefits of various manufacturing locations.

has dedicated facilities for silicone injection molding and clean room silicone molding, including liquid silicone rubber systems, and compression and injection molding for components and small parts with over-molding. Capabilities also include textiles assembly utilizing the latest sewing techniques, precision assembly, cutting welding, adhesive bonding and sealing using films and advanced fabrics. The facility can also support projects requiring RF welding, cutting and forming of PU and PVC with complete assembly of

internal supplier of fabricated parts to a different facility without those fabrication capabilities or utilize existing expertise to rapidly add the capability to that facility. Selecting a contract manufacturer with global capabilities provides an ability to regionalize strategy and shorten the supply chain. It also facilitates a strategy that can evolve over time with a partner who can help outline the costs and benefits of various manufacturing locations.