# Lynch Success Story <br> Custom Product: Umbilical Arm System 

| Lynch's customer found an organization that could provide a total solution from engineering services, manufacturing, assembly, testing for their requirements. <br> "Lynch really has its act together." - Program Manager |  |
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| Problem and Requirements | This Aerospace organization was looking to: <br> - Migrate from legacy to hydraulic, motion control technologies. <br> - Augment the knowledge/experience in their Engineering department <br> - Use Engineering Services to validate, design and analyze <br> - Manufacture the subassemblies <br> - Assemble the subassemblies <br> - Test and validate the subassemblies <br> - Document, certify and authenticate the solution <br> - Package and ship solution |
| Solution | With a Lynch partnership, the organization was able to a obtain a Total Solution from one company. <br> Subassemblies using valves, manifolds, plugs, electronics, cabling... |
| Product Application(s) | Using hydraulic, motion control to move and manipulate multiple arms within seconds. |
| Manufacturing Equipment | Matsuura 100H, Cutter Machines, Milling Machines, Test Tools, Post processing including washing, sanding, deburring, CMM |
| Tolerance | 15 seconds to move Umbilical Arm System from on to off position |
| Product Dimensions | $23^{\prime \prime} \times 40^{\prime \prime} \times 16^{\prime \prime}$ |
| Product Weight | 300lbs - 1200lbs |
| Color | Black |
| Material Type | Aluminum \& Stainless Steel |
| Material Finish | Black anodizing |
| Secondary Operations | Helicoils, First Article Inspection (FAI) |
| Industry | AeroSpace |
| Production Set | $1 \times$ Speed Control and $1 \times$ Pressure Reduction Manifold Assembly for each umbilical arm |
| Delivery Time | 8 months from Purchase Order |
| Packaging/shipping | Custom packaging and crating with point to point delivery |
| Standard Met | Data Package (Paperwork) $2 \times 3$ " Binders per Manifold Assembly |
| Drawing Software | Inventor - 3D Models/Schematics |
| Services: PMO | Project/Program Management |
| Engineering Services | Design Validation, 3D Model, Schematics, FEA, CFD |
| Testing Services | Hydrostatic, Acoustic, Functional, Dynamic |


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