



Custom manufacturing services for tubular
stainless-steel modules & equipment for critical
process industry that demand perfection

Since 1997

CLEAN

PURE

SAFE

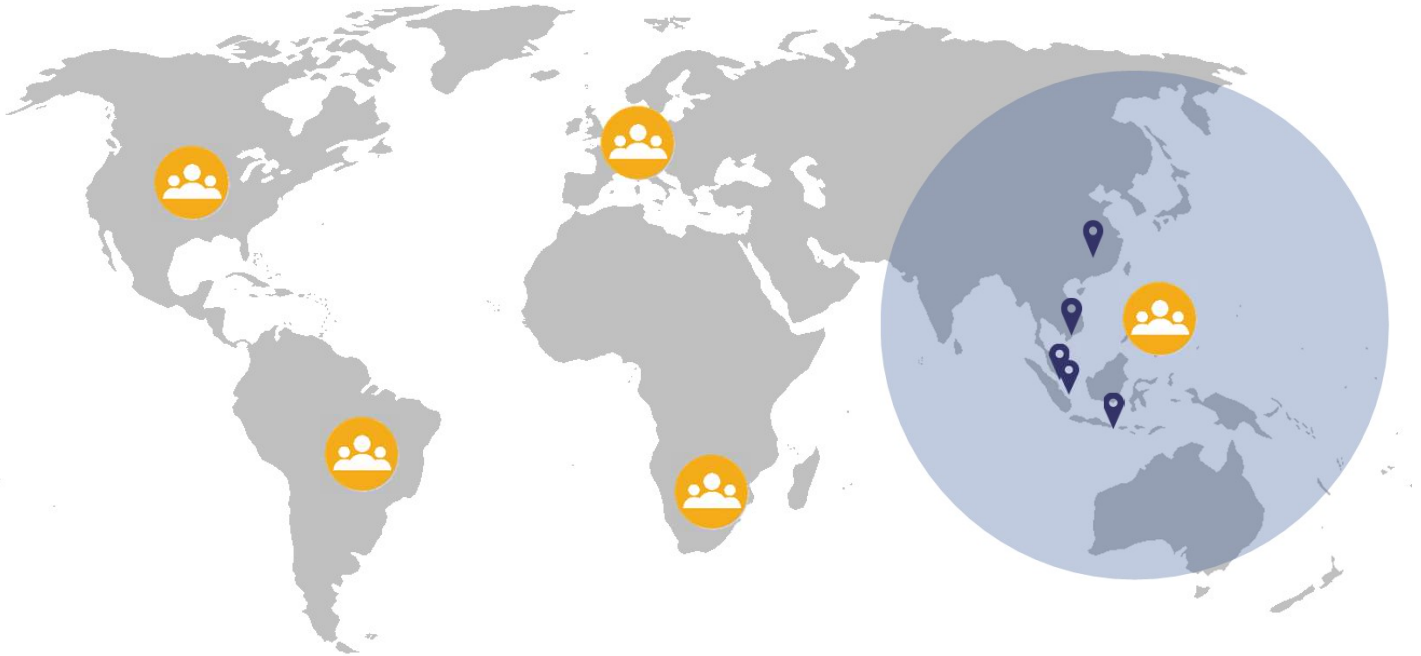
PRECISE

ACCURATE



Customers Location

Sales & Service Area



Associate Company



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Introduction

Overview

Orbital Teknik is part of the Cryogas group of companies providing industrial solutions in high purity stainless steel modules and equipment.

Armed with knowledge in high purity tubular fabrication technology for stainless steel and exotic alloy like Hastelloy & Titanium, we established a clean fabrication facility for tubular products in Malaysia in 2015.

We are always one step ahead when it comes to offering highly reliable product fabrication services; and developing technological innovations that satisfy countless industrial application needs, even under the most demanding conditions.

We boost quality in manufacturing operations with high performing, precise, reliable and high-quality products and services.

Our success is made possible with the contribution of our customers and employees, whom, with their skills and passion, has given the voice, shape and reality to the future.

We look forward to serve and support all our customers, as well as continuously striving to exceed our customers expectation.

Vision

Provide high purity solutions for an evolving customer and industry with higher product quality, low ownership cost fastest turn around time.

Mission

Through state-of-art technologies and cutting-edge processes, we develop innovative solutions for high purity industrial applications.

Values

Commitment to Quality, Service & Integrity.

Protecting the environment.

Embrace and uphold the values of ethics, honesty and trust at all levels.

Who We Are

Experienced Team

Orbital Technik engineering team is well-trained in various fluids flow condition under various temperature, pressure and purity requirements. Our fluid system expertise covers high purity gases, liquid and cryogenic media. We have technical exchange with visiting consulting experts from US & Europe in regular interval to keep our team with latest metal fabrication technology and engineering.

Serving a broad spectrum of industries from life-sciences, semiconductor and aerospace, we offer capabilities in custom fabrication, polishing services, detailed 3D CAD drawings, and analytical testing.

With over 25 years of experience, we understand the exacting needs of these industries, including the necessity for weld precision and the purity of a system.

Orbital Technik is a relationship-driven company. We pride ourselves on partnering with customers to help solve their problems quickly. When working with our customers, we commit to delivering the highest quality service within the strict specification of your requirement. Let us help you find your next solution.



Strategic Focus

Customer Experience

Our customer-centric approach means that we ensure that all our final products, services, & solutions are guaranteed superior and only of the highest quality.

People

The people in our company are those with talent, great ideas and enthusiasm will takes up the challenge of meeting each of our customer's need. They are the key to our success.

Process Excellence

Process excellence drives business excellence. Our vision is focused on continuous improvement in processes, quality and R&D development.

Growth

We set ambitious goals to deliver what we promise. We understand our customers have a choice, and we have to continuously earn their trust through constant excellence. We always uphold our integrity, values and ethical standards as we continue to win new businesses.

Key Figures



Our Strengths

Quality Certifications

Quality certification is about our commitment to continuously moving our company and our customers forward.

For Orbital Technik, quality means professionalism and a proactive attitude in taking care of each individual customer.

Our associate companies in Cryogas group is currently ISO certified. We are pioneer in tubular fabrication industry in Malaysia to adopt ISO 9001 and ISO14001 standards.

As part of the Cryogas group, we have the privilege to leverage on the quality system adopted by associate companies and proud of the technology mastered to produce world class product quality.

Modularity & Customized Solutions

Modular products and modular processes allow us to engineer a solution for almost every of our customer application.

Product modularity means flexibility, a wider range of options, faster delivery, and most important of all competitiveness.

Modular manufacturing process have been designed to assure fast turn around in production process change-over without compromising products performances, reliability.

System Certifications

UNI EN ISO
9001:2015

ISO
14001:2015

Complete Customer Care

Our modular approach doesn't stop at the delivery of a product or solution. For us this is just the start. With strong online support system via our cloud-based ERP system and product traceability program, our customers have the access to leading interactive product and services care. We aim to deliver performance improvement and on-going assistance during the entire system life cycle.



PRE-SALES

Whenever a request comes from, our engineer can quickly follow up on the inquiries. A dedicated team with skilled technicians provide application support offering assistance and innovative solutions from basic idea to concept development.



AFTER-SALES

We can help you maintain your line efficiency, turning costly downtime into profitable uptime. Spare parts, maintenance, technical and field support, including help desk assistance. For emergencies, stock replenishment or planned maintenance, we deliver original spare parts whenever you are, in a timely manner.



TRAINING

We organize standard and customized courses on how to safely and efficiently operate, maintain and troubleshoot equipment. Staff needs to understand how to properly use the system and how to take advantage of features to maximize productivity and efficiency.



DIGITAL SUPPORT

Our cloud-based ERP system allow real time access to your order tracking, invoices, spare part sales download and contact to our service. Fast and easy online access is available 24/7.

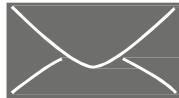


DOCUMENTATION & TRACEABILITY

- ✓ Acceptance test certificate 3.1 according to EN 10204
- ✓ Weld log
- ✓ Material, preliminary material certificates
- ✓ Helium leak test log
- ✓ Pressure test
- ✓ Customer drawings

Custom Manufacturing

Committed To Quality, Committed To You



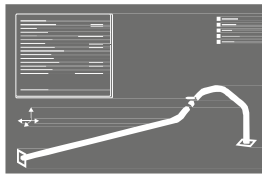
1 Receiving Your Inquiry

Your enquiry will be handled by our experienced sales engineer. They will listen and understand your needs and requirements.



2 Requirements Verification

Our design engineer will verify all your specification requirements to ensure accuracy.



3 Product Design

Our engineers are trained by US and European leading experts, with up-to-date product design practices. Armed with latest product design software such as 3D-Autocad, we are able to design complex stainless-steel module like tubing manifold, valve box, valve manifold, coaxial and multicore modules.



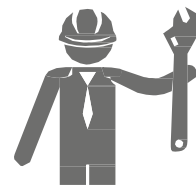
4 Design Analysis & Validation

Armed with latest design validation software such as Autodesk Simulation, Autodesk CFD, ALGOR Pipe Check, and Pro-MECHANICA finite element analysis for stress analysis for internal load, thermal expansion & contraction load.



5 Manufacturing

We operate with stringent quality system in accordance to ISO9001 quality system. All products are manufactured and tested according to the design and specification. Our manufacturing process and practice are audited by third party experts from Europe and USA to ensure it fulfill world class quality and expectations.



6 Product Acceptance Test

Our experienced and trained team of engineers and technicians will carry out the product acceptance test (PAT) for every product that has complete the manufacturing cycle, before shipping out to our customers. This is to ensure zero defects in all our products before they reach our customer's site. All test results are documented according to ISO 9001 quality system.

Manufacturing Competency

1 Assembly Of High Purity Components In Cleanroom

All components assembly is performed in clean environment to minimize particle and grease contamination.

- ✓ Orbital welding of manifolds, HP media systems and high-capacity vacuum systems
- ✓ Assembly of components (valves, process vessels)
- ✓ Quality controls and leak tightness tests using helium leak tests
- ✓ Residue-free cleaning
- ✓ Low Particle packaging
- ✓ From production to packaging, everything takes place in a controlled process



Gas Manifold Welding



Micro Fit Welding

2 25 Years Experience, Highest Level of Welding Competency

We are pioneers in the field of orbital welding with over 25 years of experience. We use the I-SEAM welding technology developed in-house to innovative manufacturing concepts. This makes it possible to produce closely spaced branch outlets with very little dead space.

- ✓ Consistent quality by ORBITALUM orbital welding with pressure and residual oxygen monitoring
- ✓ 3D orbital welding using AVC-OSC technology for complex geometries and innovative components (e.g. 45° or 60° outlets) using DVR precision turn table
- ✓ Robotic welding with precise reproducible welding processes via a parameter database
- ✓ ID collar weld produce low dead space and closely spaced branches.
- ✓ 100% weld seam inspection
- ✓ Simple documentation through microprocessor-controlled process



Closed Chamber Orbital Welding



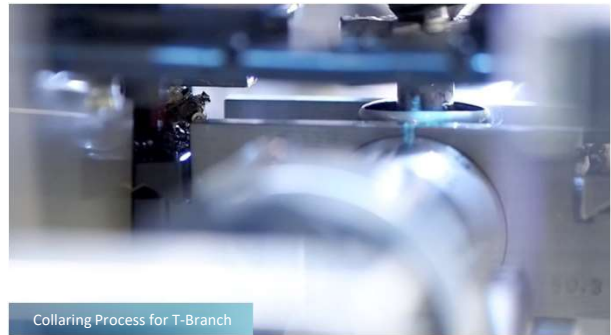
100% Clean & Full Penetration Weld Seam

Manufacturing Competency

3 Collaring Technology

We have perfected the tube collaring process. This fully developed production methods ensure reproducible quality and are tested multiple times. The collaring of T-branch for manifolds is long-established expertise. In combination with our welding expertise, closely spaced branches also are routine for our production.

- ✓ Standard branch sizes from 12.7 mm to 50.8mm
- ✓ Distance between branches of ≤ 25 mm is possible
- ✓ Various tube materials and diameters up to 101.6mm
- ✓ Special designed collaring devices and tools



Collaring Process for T-Branch



T-Branches to Perfection

4 CFOS Cleaning Technology

Oxygen cleaning is a chemical cleaning, surface preparation service for products intended for use in Oxygen service, high purity processes, and environments that can extend the life and performance of a part. Oxygen cleaning process prepares a product to be used in an Oxygen-enriched environment by removing combustible contaminants such as oils, waste, paper, fiber, dust, solvents, weld slag, dirt and sand.

- ✓ Cleaned to ASTM G93-96 Level A.
- ✓ Exceeds CFOS CGA G4.1 cleaning.
- ✓ Rinsed with DI water, purged with filtered nitrogen, capped and double bagged in heat sealed polyethylene
- ✓ Improved cleanability of the components and system
- ✓ Reduced particle retention & contamination to the process



Ultrasonic Precision Cleaning



Black Light CFOS Inspection

Our Fabricated Products

Our manufacturing capability include simple to complex modules design and fabrication



Vacuum Component



Vacuum Chamber



Box Vacuum Chamber



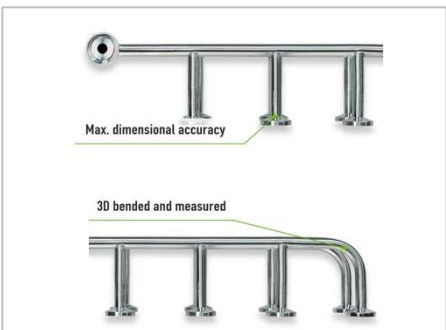
Flexible Hose



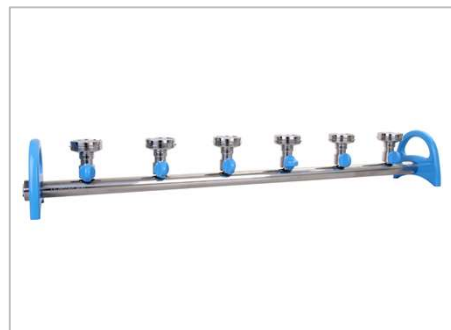
Coaxial Piping Module



Valve Manifold



Custom Manifold



PCW Manifold

Applications



Electronics A&T & Semiconductor

Our coaxial vacuum insulated stainless steel piping are indispensable to A&T customers to save time and money for their product development and final product testing.

- Test Handlers for testing and inspection of packaged semiconductor device including automotive, mobile, power, microelectromechanical systems (MEMS) and microcontrollers
- HALT/HASS thermal cycling test that require extremely high turn down ratio of LN₂ supply to achieve desired temperature downslope gradient.

Our vacuum jacketed stainless steel pipe and valves are sweat-free and do not frost even after years of service. Our products has been part of the many successful LN₂ delivery system for QUALMARK, Thermotron, RASCO, DELTA, TESEC, COHU.

Molecular Beam Epitaxy (MBE)

Our specialty equipment for low vapor pressure liquid nitrogen (LN₂) system used in critical wafer growing process such as MBE, keeping the process at ultra high vacuum for defect free wafer fabrication and increasing overall yield.

Our product has been used extensively with major world class MBE equipment from RIBER, VEECO and DCA.



Food & Beverage

Our innovative dosing equipment use for food & beverage, nutraceutical and pharmaceutical industries.

Pharmaceutical & Biotech

Our fabricated pipes and hoses can be used for the liquid nitrogen delivery system for cryo-preservation in biomedical device facility, blood bank, and hospital fertility storage.



Customer who use our products





Orbitalum products are used in manufacturing for tubular stainless-steel modules & equipment for critical process industry that demand perfection

We provide sales & service for Orbitalum products in S.E.A for last 25 years

If you are building your high purity manufacturing facility and require orbital welding & cutting equipment, contact us for advice



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