

Engineering Excellence and Innovation



**Valve Maintenance Services**



“We give you a clear solution”



**ISO 9001 CERTIFIED**  
Cert No : Q-065/21

# Welcome to ARIENZ Solutions

Arienz Solutions Sdn Bhd specializes in comprehensive repair and remanufacturing services for all control valve, choke valve, pipeline valve, safety relief valve, and on-site field service needs.

Arienz Solutions is strategically located in several industrial areas in Malaysia which is close to our customer facilities. We are covering all refining, petrochemical, power plant, process industry and others on the west side of Peninsular Malaysia. We also operate service shop in East Coast of Peninsular and in Miri to cater our East Malaysia customers. This strategic location providing us with an advantage to respond and accommodate the needs of our customers.

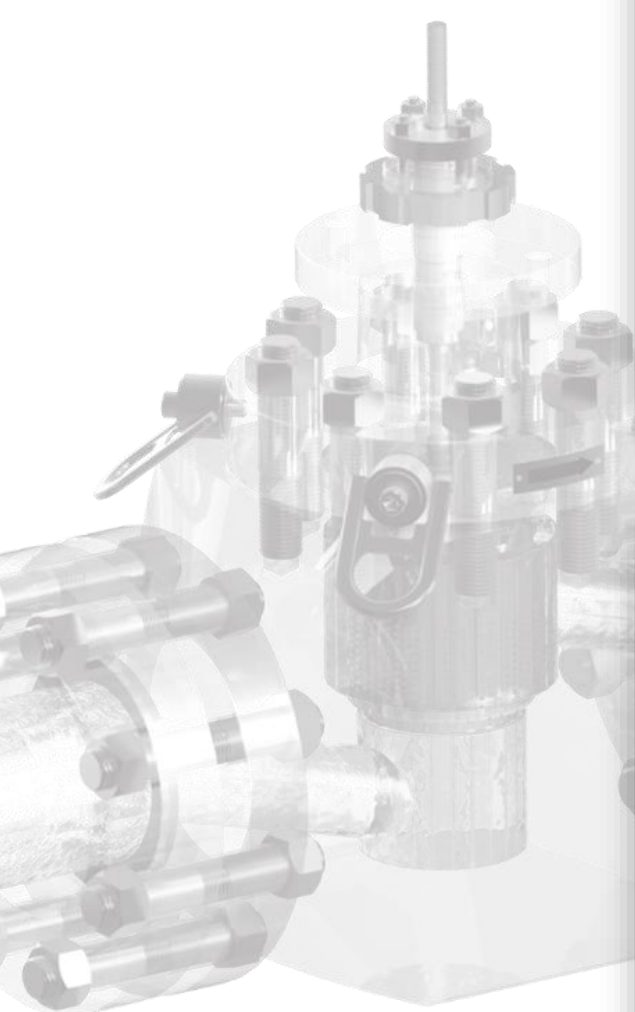
Our 13,000 square foot facility encompasses a receiving area, disassembly area, separate control and block valve QC areas, machine shop, CNC machining center, customized assembly stations, weld shop, cleaning room, instrument shop, testing center designed to perform applicable FCI-70-2-2013, ANSI, or API-6D testing requirements and also our blasting/painting shop. Our Field Services Department is located at the same facility.

Our mission as a company is to provide well-managed, customer-focused, industry-leading results providing our customers with quick solutions held to the highest industry standards. ARIENZ Solutions commitment to its customers encompasses a transparent approach of products produced with quality, dependability, and integrity in mind.



## Comprehensive Control and Choke Valves and Pipeline Valves Repair Services for Maintenance, Emergency and Scheduled Outage Requirements

The right valve repair and remanufacturing services can make a big difference to your company's ongoing operations and your long-term profitability. At ARIENZ Solutions Sdn Bhd, we specialize in providing you with the most time-effective valve repair options in the industry. We serve both East and West Malaysia areas with industrial valve repair and remanufacturing services in our shop or at your facility.



## Our Repair Facility

Our repair and remanufacturing facility include separate areas for receiving and disassembly of any type of valves. We maintain specialized control and pipeline quality control areas as well as a CNC machining center, a general machine shop, welding shop and cleaning room. Once your valves have been processed through our system, our team of certified technicians will perform extensive testing to ensure that your valve is remanufactured or repaired to the precise specifications needed.



CNC Milling



CNC Turning



Welding



Assembling

## The Repair Process

To begin the repair process, contact our sales team by phone or send an inquiry to [info@arienz.my](mailto:info@arienz.my) to receive a quotation to repair your equipment. Our sales team will assist you with any questions and plan for the arrival and execution of the repair process. Our well certified technicians have undergone extensive training in order to provide the fastest and most reliable solutions to maximize your equipment's lifecycle and performance. We service all types of industrial valves, including Control valves, Choke valves, API & ANSI pipeline valves, Pressure & Safety relief valves, and instrumentation. We also repair valve actuation, valve gear operators and electric-hydraulic actuators in our service facility. At ARIENZ Solutions, our repair process consists of five essential steps:

### ❖ Pre-Test and Disassembly

During the pre-test and disassembly phase, we will take photos of the valve's current condition and then subject it to an array of tests to determine function. We then disassemble the valve down to its basic components and remove all corrosion, rust and debris found in any part of the valve.

### ❖ Quality Control Inspection and Machining

Our quality control inspection process begins with photographs and professional guidance from our QC inspector to ensure the right solution for your valve remanufacturing project. Machining and weld repairs may also take place during this phase.

### ❖ Assembly, Testing, Diagnostics

The technicians at ARIENZ Solutions will remanufacture, assemble and calibrate your valve to precise OEM specifications. Shell and seat leak tests will be performed to ensure that your remanufactured valve complies with all relevant ANSI, API-6D and FCI-70-2-2013 requirements. Valvelink or Benchmark diagnostics, if applicable.

### ❖ Final Check and Photography

We photograph your completed valve to provide you with a visual record of the work we did on your behalf.

### ❖ Electronic Documentation

Finally, we provide you with electronic documentation for your company records.

## Quality Control

Quality Control is systematically applied by a team of highly qualified inspection personnel to ensure that 100% of the products shipped from our factory conform to all of the requirements of our customers. ARIENZ Solutions remains committed to the highest standards of Performance and Quality.



Coordinate Measuring Machine (CMM)



Hardness Tester



Roundness Tester



Height Gauge



Profile Checker

## Repair for All Types of Valves

### Comprehensive Valve Testing Services

The right valve testing and inspection services can streamline your company's compliance process and can ensure the best possible performance from your industrial equipment. At ARIENZ Solutions, we offer a wide range of testing both in-house and out from our trusted partners to ensure that your industrial valve repair and inspection processes go smoothly and according to plan.

As part of our valve repair process, we perform comprehensive testing to ensure that your components work as intended when they are installed at your facility. We perform shell leakage and seat leakage tests that meet ANSI, API-6D and FCI-2-2013 industry standards and requirements. We also can provide a range of additional testing options, including the following:

- Hydro shell test
- Dye penetrant testing
- Backseat tests
- Closure tests
- Stress analysis
- Hardness testing
- X-ray inspections
- Mag particle testing
- Positive Material Identification (PMI)
- Fugitive Emission testing
- Load and deflection testing of actuator springs

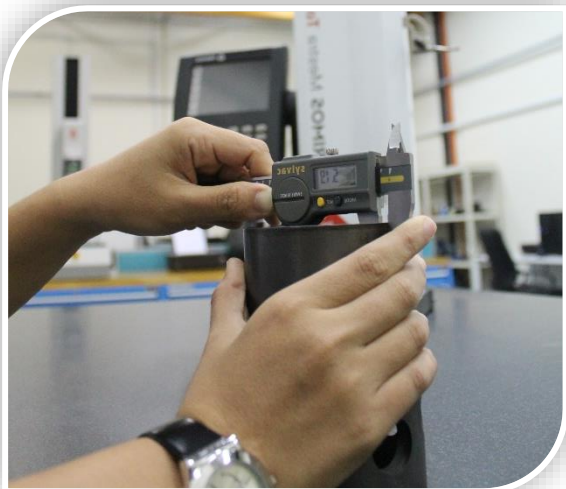
All our valve testing services are designed to provide the most accurate information for your company and to ensure that your valves are ready to perform as needed in your facilities.





## Remanufactured and Guaranteed Industrial Valves from Our Inventory

Remanufactured and Guaranteed valves, better known as R&G valves, are typically a much better value for your company than ordering new valves. At ARIENZ Solutions, we provide Remanufactured & Guaranteed valves, actuators and instrumentation built to OEM standards and specifications. Our technicians are certified and undergo the latest training to ensure that your valves meet your specifications and your needs perfectly. Our remanufactured units serve as a means to minimize downtime and guarantee compliance for standard, obsolete or non-stock products. If you need R&G valves or expert valve repair services for your own equipment, we can provide the right options for your company.



## Need it now?

When you really need it, a replacement can't arrive fast enough. ARIENZ Solutions is equipped and ready to provide you with a Remanufactured unit (Reverse Engineering) from our in-house inventory. Just tell us what you need and we'll send you a quotation with specification sheet detailing the equipment specs and ship you a remanufactured unit specific for your application. Our R&G valves are a fast replacement solution for disabled equipment as well as Warehouse Spare options to minimize downtime in emergency situations. We provide 24/7 support. You will rest assured knowing the cost ahead of time while upholding your schedule and budget. Once you receive your remanufactured unit, pull and send us your existing valve for repairs. By maintaining an inventory your process time is reduced to a bare minimum and you will skip the headache of future plant downtime due to unavailable and disabled equipment. Contact us today to ask about our unparalleled breadth of valves available.

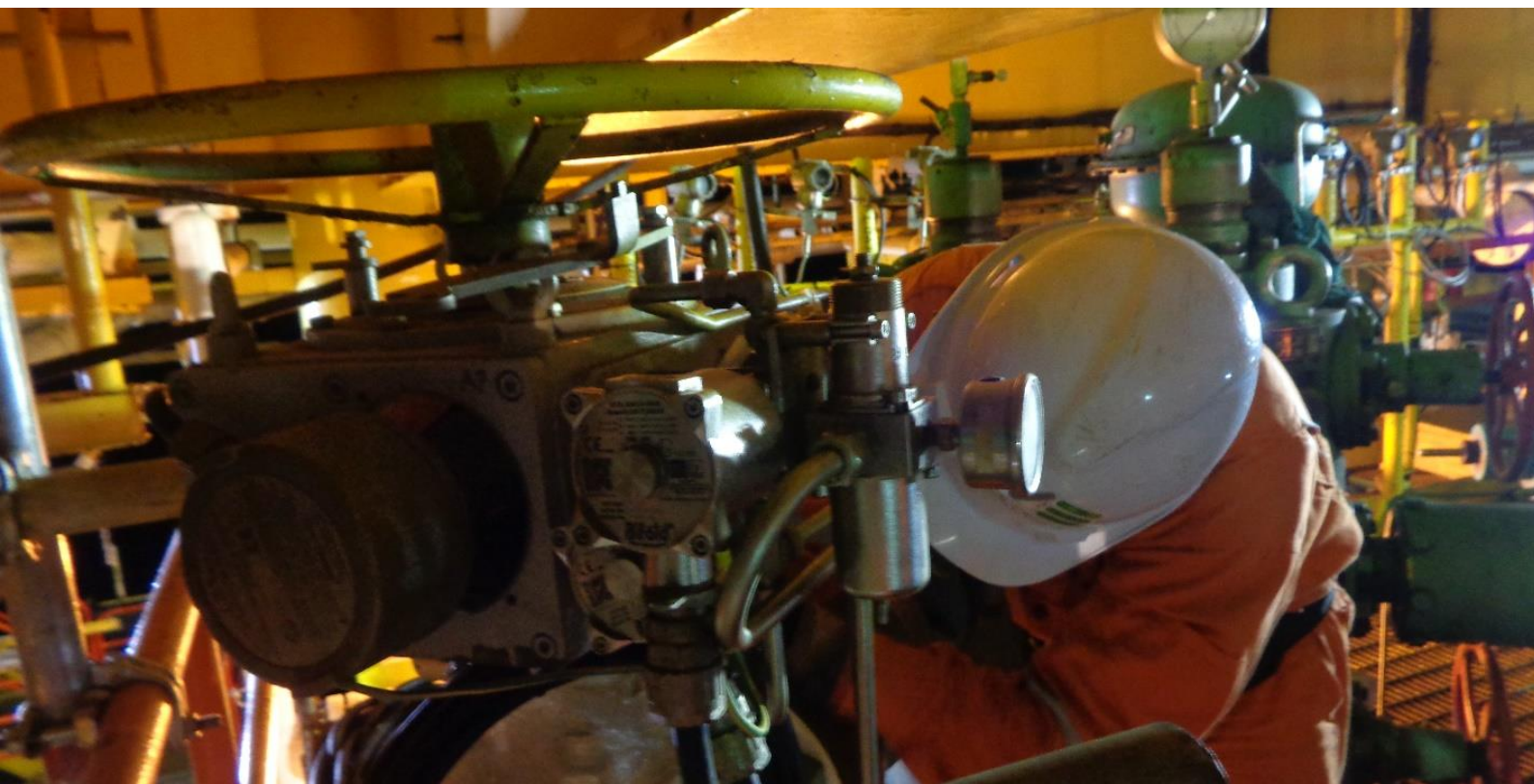


## Guaranteed Quality

When you need a remanufactured valve, only ARIENZ Solutions encompasses the expertise necessary to guarantee your equipment will operate with like-new performance. All valves are disassembled, blasted to bare metal with PMI testing performed on all wetted parts. All materials and tolerances are checked to confirm they are compliant with the original design to meet ASME B16.34, API-598, API-623 or API-6D standards. Every step of the remanufacturing process – from machining to welding, assembly and testing – our quality control personnel regulate and ensures the process has been completed according to industry regulations and according to your order specifications. Upon completion, every valve is serialized with records stored in our live online database making future orders a breeze. All of our remanufactured units are backed with a one-year warranty. In short, we are qualified, trained and equipped to provide the quality equipment and services you need.

## Field Services

**Arienz Solutions** provides 24/7 comprehensive field services for all control valves, pipeline valves, choke valves and pneumatic, hydraulic, electric actuation. We have a team of competent technicians that are well trained and certified with up-to-date plant specific credentials. Our on-site field services include:



- In-line Inspection & Repair
- Troubleshooting
- Installation
- Removal
- Field Dimensioning (RE)
- Modification
- Control Valve Diagnostics
- MOV Repair / Diagnostics
- Testing
- Commissioning

We offer rapid response times for preventative maintenance, emergency call-out or scheduled outage requirements. Our technicians have service trucks equipped with the tools and equipment necessary for nearly any on-site need. Our technicians can diagnose, disassemble, take measurement of critical components for reverse engineering, re-assemble and site testing.

## Instrumentation Sales & Repair Services

**Arienz Solutions** provides comprehensive instrumentation repair services for all digital, analog and pneumatic controls. We are capable of supplying and maintaining inventory of new and refurbished instrumentation ready for calibration and installation. We service all major makes and manufacturers, including Fisher, Valtek, Rosemont, Westlock and Parker. Our exclusive repair services provide our customers with the ability to manage and control their operations more efficiently and accurately to meet desired parameters. Our repair services include:

- Positioners
- Controllers
- Transmitters
- Switches
- Solenoid
- Quick Exhausts
- Trip Valves
- Gauges
- Sight Glasses
- Level Transmitters

We offer rapid response times for preventative maintenance, emergency call-out or scheduled outage requirements. We can also provide on-site repair and calibration services.

## Valve Sizing and Selection

- Liquid Service
- Gas Service
- Vapor Service
- Steam Service

The screenshot shows the 'MVE Choke Sizing Program - Data Entry Form' software interface. The window title is 'Data Entry Form - FlowCalcs'. The interface includes a ribbon menu with options like 'Home', 'Filter', 'Advanced', 'Refresh', 'Save', 'Spelling', 'Replace', 'Go To', 'Switch', and 'Text Formatting'. Below the ribbon, there are input fields for 'Quote No.', 'Customer', 'Location', 'Field / Platform', 'Ref / Well', 'Application', 'Quantity', and 'Tag Numbers'. There are also buttons for 'Return to Welcome Screen', 'Date' (5/4/2021), 'New Calculation', and 'Delete Calculation'. A 'Select Type of Calculation' section has radio buttons for 'Liquid Flow, Choke Sizing', 'Liquid Flow, Flow Rate', 'Gas Flow, Choke Sizing', 'Gas Flow, Flow Rate', and 'Multiphase Flow, Choke Sizing'. A table for 'Model and Trim' is visible, with columns for 'Basic Model', 'Model and Trim Size', 'Trim Type', and 'Max. Cv'. The table contains three rows of data. At the bottom, there is a 'Calculation Reference No.' field and an 'Enter Flow Data' button.

Basic Model	Model and Trim Size	Trim Type	Max. Cv
CVC1ME	CVC1ME-1"	CAGE TRIM	17.5
CVC1SME	CVC1SME-0.5"	CAGE TRIM	4.3
CVC1NSP	CVC1NSP-0.75"	CAGE TRIM	1.0



## E-Book (Digital Library)

**Arienz Solutions** is capable to assist client in developing Digital Library by focusing in the collection of digital objects that can include text, visual material, audio material, video material, stored as electronic media formats (as opposed to print, microform, or other media), along with means for organizing, storing, and retrieving the files and media contained in the library collection. Digital libraries can vary immensely in size and scope, and can be maintained by individuals, organizations, or affiliated with established physical library. The electronic content may be stored locally, or accessed remotely via computer networks. An electronic library is a type of information retrieval system.

**Reverse engineering** is the process of duplicating an existing component, subassembly, or product without having the original drawings, documentation, or computer models. Reverse engineering can be useful in situations where you need to identify an assembly's components and their interrelationships. Reverse engineering enables the duplication of an existing part by capturing the component's physical dimensions, features, and material properties. Before attempting reverse engineering, a well-planned life-cycle analysis and cost/benefit analysis should be conducted to justify the reverse engineering projects. Reverse engineering of a part may be attempted even if it is not cost effective, if the part is absolutely required and is mission-critical to a system.

Following are reasons for reverse engineering a part or product:

- The original manufacturer of a product no longer produces a product
- There is inadequate documentation of the original design
- The original manufacturer no longer exists, but a customer needs the product
- The original design documentation has been lost or never existed
- Some bad features of a product need to be designed out. For example, excessive wear might indicate where a product should be improved
- To strengthen the good features of a product based on long-term usage of the product
- To explore and to improve product performance and features
- The original CAD model is not sufficient to support modifications or current manufacturing methods
- The original supplier is unable or unwilling to provide additional parts
- The original equipment manufacturers are either unwilling or unable to supply replacement parts, or demand inflated costs for sole-source parts
- To update obsolete materials or antiquated manufacturing processes with more current, less-expensive technologies

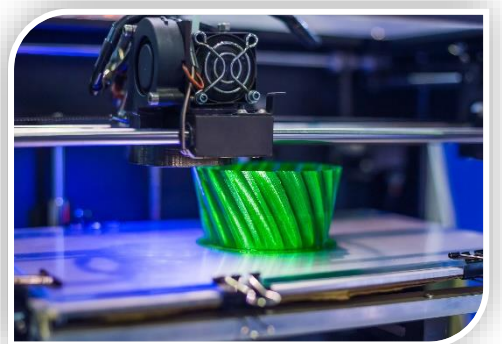
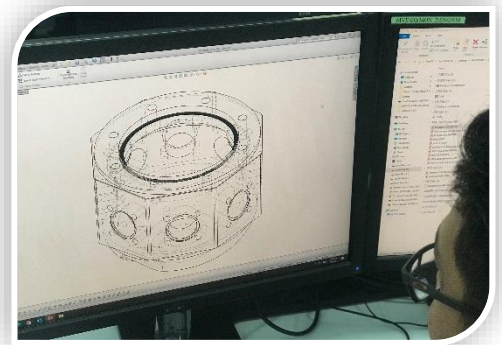
**Reverse engineering** of mechanical parts involves acquiring three-dimensional position data in the point cloud using laser scanners or computed tomography (CT). Representing geometry of the part in terms of surface points is the first step in creating parametric surface patches.

To achieve excellent precision measurement, we will re-measure the products by using Coordinate Measuring Machine (CMM). The advantage of the coordinate measuring machine is that it can measure items that are difficult to measure with other measuring machine with high accuracy.

A good polymesh is created from the point cloud using reverse engineering software. The cleaned-up polymesh, NURBS (Non-uniform rational B-spline) curves, or NURBS surfaces are exported to CAD packages for further refinement, analysis, and generation of cutter tool paths for CAM.

We are capable to help our customer to identify any metal components from their products by using Spectrometer. Optical Emission Spectroscopy, is a rapid method for determining the elemental composition of a variety of metals and alloys.

From the CAD images, we are able to produce the exact replicas of any parts with 3D printer. The use of 3D printer is very important for customer that needs to compare the parts with the original components before the actual manufacturing.



## Valve Asset Management

Valve failure can represent far more than the capital cost of replacing the products. With many operators looking to maximize plant uptime and efficiency, regular monitoring and analysis can help the industry to maintain these essential components proactively and cost effectively.

### Maintenance Challenges

An integrated approach to valve maintenance planning requires plants to consider many factors that may contribute to downtime and safety and environmental risks, including:

- Changes to plant process conditions
- Equipment used throughout the plant's operations and any changes made to it
- Safety records and training of the workforce
- Service records and parts used
- Amount of maintenance needed to avoid failure
- Analysis of repeat breakdowns
- Quantity on hand and availability of spare parts
- Changes in regulations

That's where a valve asset management system comes in...a record-keeping system specifically for valves. Knowing the history of each valve also helps you manage inventory. Being able to predict what parts and materials are most likely to be needed allows you to have them on hand for faster repairs or maintenance.

The system can be access through the web provides comprehensive records of locations, valve information, maintenance history, test and repair frequencies and test reports available at a touch of a key. The system can be securely accessed by the customer from any internet-enabled computer, and customized reports can be viewed or printed allowing the complete valves inventory to be monitored in detail at any time.





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