

QUALITY ASSURANCE MANUAL

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Printed copies of this manual are deemed Uncontrolled

Chamco Industries Ltd.

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Revision History

Revision	Date	Description
0	27-Feb-2009	Formalized the QA Manual and updated it to ISO 9001:2008.
1	23-Mar-2012	Updated to clarify scope of registration.
2	8-Mar-2013	Updated for Annual Review Items.

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Quality Management System Authorization

Chamco Industries Ltd. is committed to ISO 9001 as our Quality Management Standard to better serve our staff and customers through continuous improvement.

Chamco management shows their support and commitment to the successful achievement of our quality goals by signing this document:

Malcolm Cox
President & CEO

Juanita Allan MBA
VP Operations

Quality Vision Statement

OUR APPROACH

At Chamco, we strive for excellence by listening to our customer's feedback and by making continuous improvement at the core of everything we do.

OUR PEOPLE

Our people are the key to our success. We encourage our employees to improve our company, our products and our services by contributing their suggestions for improvement.

OUR COMMITMENT

We work hard to understand our customer's requirements, solve their problems and strive to deliver exceptional value.

Quality Policy

Chamco Industries Ltd. is committed to providing the highest quality of products and services.

We strive to satisfy customer's needs by:

- Timely delivery of products and services that meet our customer's requirements;
- Continuous improvement of our processes and systems;
- Ensuring our team is properly trained to serve our customers.

4. Quality Management System

Scope and Introduction

General

The purpose of this Quality Assurance Manual is to define the CHAMCO's Quality Management System (QMS) and policies. CHAMCO has developed and implemented an ISO 9001:2008 Quality Management System to meet customer requirements, strive to exceed their expectations, and make CHAMCO a better company. The Quality Management System complies with ISO 9001:2008. It is applicable to all CHAMCO employees.

Chamco Industries Ltd. scope of registration is for:

Supplier and modular packager of pumping and compression equipment. Specializing in compression and fluid handling, providing sales, design planning, maintenance, installation and fabrication services to energy, resource, utility and manufacturing markets.

In addition to the above scope, CHAMCO adheres to customer specific and regulatory requirements.

Application

CHAMCO has determined that the following requirements are not applicable to the operations of the company and are documented as exclusions.

Exclusion: ISO 9001:2008 Section 7.3, Design and Development, including all subsections.

Justification: Design and Development (7.3) are not specified requirements of customer contracts and Chamco does not perform any of these activities. Chamco does not design or develop products. The customers specify all principal product characteristics. Our activities are limited to developing methods and means of production and fabrication of our products.

Exclusion: ISO 9001:2008 Section 7.5.2, Validation of processes for production and service provision.

Justification: All resulting output can be verified by subsequent monitoring or measurement at site during normal operation.

Therefore, they are not included in the scope of registration and excluded from the Quality Management System. These exclusions do not affect CHAMCO's ability or responsibility to provide the level of quality and service that meets or exceeds customer and regulatory requirements.

4.1 General Requirements; 4.2 Documentation Requirements

CHAMCO will establish and maintain a documented Quality Management System, using appropriate processes for document control.

The Quality Management System includes policies, processes, work instructions (as needed) and related forms and records as defined in the *Quality Assurance Manual*.

The Quality Assurance Manual outlines CHAMCO's Quality Management System policies, defines their purpose and scope, and assigns responsibilities for carrying them out.

CHAMCO's Quality Management System manages the preparation of quality goals and objectives for continuous review and improvement and identifies the controls, processes, equipment, resources and skills necessary to achieve the required quality.

Our Quality Management System clarifies standards of acceptability for all features and requirements of the system.

CHAMCO ensures that all CHAMCO employees involved in the production of our services have access to the Quality Assurance Manual, the most current versions of CHAMCO's processes and work instructions, and related forms. In addition, CHAMCO ensures that all of its employees have the ability to participate, through the quality system, in continuous reviews and improvement initiatives.

It is the responsibility of the Management Team and the Quality Management Representative to ensure that our quality system, as it is documented and implemented, meets the requirements of ISO 9001.

Documentation Table: Levels

Level	Type	Description
I	Quality Assurance Manual	The policies CHAMCO has put in place to meet the requirements of ISO 9001.
II	Processes	The procedures CHAMCO uses to ensure consistent, efficient and timely delivery of products and services. The procedures meet the requirements of CHAMCO's Quality Management System and support the policies stated in the <i>Quality Assurance Manual</i> .
III	Work Instructions	Specific instructions that support the CHAMCO processes.
IV	and Documents	Training records and related forms.

The security structures of our document control databases have defined access levels appropriate for each position in the quality system.

CHAMCO has established Controlled Document management systems. These systems control all the documents and data related to our Quality Management System and the requirements of ISO 9001.

These systems have been established to ensure timely access to correct and current versions of CHAMCO forms, procedures and work instructions.

CHAMCO shall ensure that all changes to documents are controlled and approved before issue.

CHAMCO shall ensure that all documents and data relating to the Quality Management System are reviewed and approved for accuracy and completeness prior to issue and that invalid and/or obsolete documents are not in use, in compliance with the ISO 9001 requirements.

Document control for all documents relating to CHAMCO's Quality Management System is the responsibility of the **Quality Management Representative**.

CHAMCO forms, procedures and work instructions are controlled electronically.

CHAMCO's document control system provides for the issue, distribution, revision, change and archival of documents which relate to CHAMCO's Services and Quality Management System.

All Quality Management System documentation (including policies, procedures, work instructions and forms) are available through a direct link located on each desktop. These are deemed controlled documents. All print copies of any of these documents are considered to be uncontrolled copies.

Controlled and immediate network distribution ensures that only the most current revision of any document is in use.

No revisions can be made in the controlled file structure without the approved release of a new document.

Archived revisions and obsoleted forms are available.

CHAMCO's Quality Management records are stored in the relevant databases established for this purpose.

CHAMCO shall ensure that appropriate quality records are generated, maintained and archived for ease of accessibility and verification.

The **Quality Management Representative** ensures that quality records are managed, maintained and archived as appropriate.

All Staff are required to generate, maintain, file and archive specific records.

Records are generated and maintained to verify control of quality related activities. These records serve to demonstrate that our products are designed in accordance with specified processes.

The storage of quality records protects records from deterioration and loss. Electronic backup of these records is done and the process is established in a documented procedure.

Records are retained as per established record retention schedules.

Quality Records shall include, but are not limited to, the following:

- Contract Review Records
- Nonconformance/Corrective Action Reports
- Internal Audit Reports
- Management Review Records
- Personnel Training Records
- CHAMCO Quality Assurance Manual
- CHAMCO Flow Charts and Procedures
- Service Related Records

Reference: QM 08 - Document Control

QM 09 - Control of Records

5. Management Responsibility

5.1 Management Commitment

The Management of Chamco Industries Ltd. will endorse and properly support the CHAMCO Quality Management System.

CHAMCO's **Management Team** is responsible for implementing our Quality Management System and ensuring that it meets the requirements of the ISO 9001 Standard. We are committed to ensuring that our products and services adhere to any regulatory or statutory requirements, such as CWB, ABSA, NIST and all regulatory regulations associated with the products and services provided.

The **Quality Management Representative** ensures continuous quality improvement.

Internal and External Auditors will regularly evaluate the Quality Management System.

The **Quality Management Representative**, in conjunction with the **Management Team**, will identify CHAMCO's verification requirements. We will have adequate resources and assign trained personnel for verification activities.

In pursuit of this overall management policy, it is the intent of CHAMCO that all services offered to the marketplace will consistently meet the customers' requirements.

It is the responsibility of all assigned personnel to objectively evaluate the quality of our services and quality system.

It is the responsibility of the **Management Team** to support this policy and address the findings of the quality system evaluations.

CHAMCO's products and services will be regularly reviewed and evaluated by scheduled audits of CHAMCO's Quality Management System. Reviews are documented and stored.

Reference: QM 11 Audits

5.2 Customer Focus

CHAMCO strives to identify current and future customer needs, meet customer requirements and exceed customer expectations.

The **Management Team** ensures that customer requirements are understood and met by requiring compliance with documented customer communication procedures as stated in this Quality Assurance Manual. Customer requirements are determined, converted into internal requirements and communicated to the appropriate people in Chamco.

5.3 Quality Policy

CHAMCO is committed to ensuring that all services CHAMCO offers to the marketplace will consistently meet the customer's requirements.

All new employees are required to review the Quality Assurance Manual as part of their orientation to CHAMCO.

The Quality Policy is reviewed for adequacy, effectiveness and relevance by the **Management Team** as part of the management review process.

CHAMCO's Quality Policy is prominently displayed throughout the workplace.

CHAMCO's objectives for the year are set and reviewed during the management review process each year.

5.4 Planning

CHAMCO will establish and maintain a documented Quality Management System. The Quality Assurance Manual outlines CHAMCO's Quality Management System policies, defines the purpose and scope of these policies, and assigns responsibilities.

CHAMCO's Quality Management System manages the preparation of quality plans for continuous review and improvement and identifies the controls, processes, equipment, resources and skills necessary to achieve the required quality.

Our Quality Management System clarifies standards of acceptability for all features and requirements of the system.

CHAMCO ensures that all employees involved in provision of services have access to the Quality Assurance Manual, the most current versions of CHAMCO's Operating Procedures and Work Instructions, and the ability to participate, through the quality system, in continuous review and improvement.

It is the responsibility of the **Management Team** and the **Quality Management Representative** to ensure that our quality system, as it is documented and implemented, meets the requirements of the ISO 9001 Standard.

5.5 Responsibility, Authority and Communication

CHAMCO's **President and CEO** will appoint a management representative who, irrespective of other responsibilities, has the authority and responsibility to implement and maintain CHAMCO's Quality Management System.

The **Quality Management Representative** may delegate administrative responsibilities to defined and authorized groups or individuals within CHAMCO.

It is the responsibility of the **Management Team** to ensure that our quality system is maintained and to ensure that all employees are empowered to contribute to it.

The ultimate responsibility for quality remains with the **President & CEO** of CHAMCO.

The **President & CEO** and **Management Team** are responsible for ensuring that the quality processes for delivery of our services are maintained and followed.

The responsibility, authority and interrelation of all personnel who manage, perform and verify work affecting quality is defined in CHAMCO's Quality Management System.

All staff is granted the authority to:

- Initiate action to improve the quality of CHAMCO procedures
- Identify and record any process quality problems
- Initiate, recommend or provide solutions to problems
- Verify the implementation of solutions to problems and improvements to quality

The **Management Team** has a standing Quality Issue agenda item for their regular Management Meetings to review quality issues. Quality issues which require further action may be referred to the **President & CEO**.

Quality planning, process control and internal quality audits are delegated to the **Quality Management Representative** who is the liaison between ISO 9001 and the **Management Team**.

*Reference: QF 35-09 Organization Chart
QM 07 Generic Quality Guidelines*

6. Resource Management

6.1 Provision of Resources

Internal and External Auditors will regularly evaluate the quality system.

The **Quality Management Representative**, in conjunction with the **Management Team**, will identify CHAMCO's verification requirements. They will have adequate resources and assign trained personnel for verification activities, to ensure the Quality Management System, and services are regularly evaluated by qualified people.

It is the responsibility of all assigned personnel to objectively evaluate the quality of our processes, services and quality system.

It is the responsibility of the **Management Team** to support this policy and address the findings of the resulting evaluation.

CHAMCO's services are regularly reviewed and tested by regular audits of CHAMCO's quality management system. Reviews are documented and stored as follows:

- Quality system records are housed in the Quality Management Representatives files.
- Service Records are maintained electronically and in printed form.

6.2 Human Resources

CHAMCO recognizes that training is a major component in attaining our Quality Management System objectives, and identifies training needs for all CHAMCO positions relating to the services offered. A documented procedure is used to determine and manage the training provided within departments and records are kept in the personnel files as applicable. This ensures that all positions in CHAMCO's quality system are staffed by qualified and trained personnel.

The **Management Team** is responsible for identifying training requirements and ensuring that all staff receives the required training.

All staff in positions affecting the quality of CHAMCO's services and product, receives training in CHAMCO's quality system documents.

Reference: QM 10 Training

6.3 Infrastructure; 6.4 Work Environment

CHAMCO controls the quality of its procedures by clearly identifying participants' roles, communication links and stages of review and approval as applicable in each procedure. In addition, CHAMCO identifies and provides the training required to carry out procedures.

CHAMCO's **Management Team** is responsible for:

- Ensuring that CHAMCO's processes are carried out, maintained and consistently controlled
- Referring to the procedures when determining specific responsibilities
- Providing the resources required to carry out CHAMCO's procedures efficiently and effectively
- Maintaining a suitable working environment, including effective tools for communication between and within CHAMCO.

CHAMCO procedures, work instructions and forms are controlled. Procedures outline tasks, responsibilities and timelines as applicable.

7. Product Realization

7.1 Planning of Product Realization; 7.2 Customer-Related Processes; 7.3 Design and Development (Exclusion - see Section 4 Quality Management System, Scope and Introduction)

The initial stage of CHAMCO's Product and Service provisions are a general process in which the customers initiate the perceived product requirements or service to be performed. Chamco will evaluate the requests and ensure that they are feasible as requested. If additional findings arise, then Chamco will inform the customer of those findings and request further instructions.

Reference: Process Flow Charts QF 35-01 through QF 35-06

7.4 Purchasing

7.4.1 Purchasing Process; 7.4.2 Purchasing Information

Purchased services or products within the CHAMCO scope of business will include professional, services, technical services, reliable products and required support materials.

CHAMCO ensures that the purchased products or services conform to specified purchase requirements, contractual responsibilities and the established standard contractual agreements included with the product or service as specified by CHAMCO to the extent applicable.

*Reference: QF 10-01 Supplier Pre-Qualification Questionnaire
SF 34 Contractor Safety Policy Acknowledgment*

7.4.3 Verification of Purchased Product

Purchased product is verified upon receipt to ensure that it meets CHAMCO's specified purchase requirements.

Where Chamco or its customer intends to perform verification at the supplier's facilities, Chamco will indicate the intended verification arrangements and method of product release in the purchasing information.

7.5 Production and Service Provision

7.5.1 Control of Production and Service Provision

CHAMCO provides manufacturing and service options to our internal and external customers by offering product manufacturing and technical services. These products & services are developed under controlled conditions that may or may not contain the following information:

- Requirements contained in our Sales and Engineering documentation.
- The required services as contained in the Service Order.
- Detailed work instructions are provided as needed.

7.5.2 Validation of Processes for Production and Service Provision (Exclusion - see Section 4 Quality Management System, Scope and Introduction)

7.5.3 Identification and Traceability

All CHAMCO products and services are identified with traceable project numbers. These project files are consistently used to identify the customer's purchased equipment, track their position within the process and ensure traceability through the service and production stages as required.

Reference: QM 16 Identification and Traceability

7.5.4 Customer Property

CHAMCO exercises care with customer property while it is under CHAMCO's control or being used by CHAMCO. CHAMCO identifies, verifies and protects customer property that has been provided for service. If any customer property is lost, damaged or otherwise found to be unsuitable for use, it is reported to the customer and records about the incident are maintained.

7.5.5 Preservation of Product

CHAMCO maintains a secure system in the premises for the handling and storage of CHAMCO's digital products & records. CHAMCO staff is responsible for backing up and maintaining the server.

CHAMCO ensures that product is preserved as per our customers' requirements.

CHAMCO service providers ensure that components received from our customers are preserved to ensure that no further deterioration effects occur.

CHAMCO ensures that materials and components received are preserved in the manner in which is required to ensure that the integrity of the materials and components are maintained.

All personnel in Chamco Industries Ltd. that handle, store or distribute equipment are responsible for implementing this standard.

The Chamco Industries Ltd. ensures the proper electronic management and distribution of product. In particular, CHAMCO ensures that only authorized changes enter the system.

Handling

CHAMCO handles all materials and products with respect and care. All equipment/material is identified throughout all processes. Environmental requirements are met and maintained.

Storage

CHAMCO records are stored electronically and backed up regularly. Where documents are paper copy; these documents will be retained and stored in a safe environment, clearly labeled and retrievable.

7.6 Control of Monitoring and Measuring Devices

CHAMCO ensures that all testing equipment is regularly scheduled for maintenance, including a review of all services performed by outside vendors.

Calibration status will be clearly identified on all CHAMCO equipment.

Calibration of CHAMCO equipment (whether by CHAMCO or an outside vendor) will maintain traceability back to NCR (National Research Counsel) or NIST (National Institute of Standards and Technology).

CHAMCO Equipment will be handled with care to protect against damage and deterioration. It will be adjusted and re-adjusted (during the calibration process) when necessary to maintain accuracy.

CHAMCO shall assess and record the validity of the previous measuring results when the equipment is found not to conform to requirements. Records of the results of calibration and verification will be maintained.

Reference: QM 17 Calibration and Maintenance

8. Measurements, Analysis and Improvement

8.1 General

CHAMCO records and analyzes statistics on the Quality Management System as input for quality decision making.

CHAMCO shall ensure continuous quality improvement of the Quality Management System by identifying nonconformance trends, analyzing identified problems, determining immediate and root causes, and targeting areas for improvement.

The **Quality Management Representative** is responsible for developing, deploying, delegating and reviewing statistics.

The **Management Team** reviews this data on a regular basis.

8.2 Monitoring and Measurement

Statistical data is based on results and trends recorded in:

- Suggestions for Improvements
- Customer Complaints
- Internal Audit Reports
- Non Conformance Reports

Records of data and statistics are maintained by the **Quality Management Representative**. Reports are issued to concerned departments and the **Management Team**.

8.2.1 Customer Satisfaction

Customer satisfaction data is collected through customer contact. Customer satisfaction data is routinely incorporated into the initiative reporting process for the Quality Management System.

8.2.2 Internal Audit

A system of planned and periodic audits verifies compliance with all aspects of CHAMCO's Quality Management System. This ensures that CHAMCO's Quality Management System is functioning correctly and that the requirements of the ISO Standard are met.

The Internal Auditors chosen from CHAMCO staff are qualified by education and experience to carry out audits. Internal Auditors receive audit training and are supervised by the Quality Management Representative to ensure proficiency.

The Quality Management Representative schedules internal audits, communicates audit results and initiates corrective actions.

All quality related functions are audited at least once each calendar year. Following the review of internal assessment findings, external assessment findings, nonconformance trends, corrective action requests and initiative requests, additional internal assessments may be required.

Assessments are performed in accordance with established procedures and are not performed by staff directly accountable to the department or the area being audited.

Internal Auditors document objective evidence of compliance or noncompliance with CHAMCO's procedures in Internal Audit Reports and recommend action through Suggestions for Improvement if necessary.

Follow-up corrective action is routed to the Quality Management Representative and implemented by CHAMCO as necessary. Assessment of the corrective action is performed by the Internal Auditor(s) responsible for the original audit whenever possible. All findings and results are documented.

Reference: QM 11 Quality Audits

8.2.3 Monitoring and Measurement of Processes

CHAMCO processes are reviewed on a continuing basis for suitability in achieving customer requirements. Process change suggestions are incorporated as Suggestions for Improvement in the Quality Management System. Customer satisfaction is assessed.

8.2.4 Monitoring and Measurement of Product

The processes are reviewed on a continuing basis for suitability in achieving customer requirements. Process change suggestions are incorporated as initiatives in the Quality Management System. Customer satisfaction is assessed.

8.3 Control of Nonconforming Product

CHAMCO maintains a planned and documented system for reporting nonconformance in the Quality Management System.

Nonconformance reports are created and reviewed, and the resulting actions are documented.

The procedures used in the service provided by CHAMCO ensures that all equipment that is identified as nonconforming is clearly marked and segregated to ensure the unintended use of the equipment will not occur and that all customer owned property that is Nonconforming is identified clearly upon distribution.

Components received by CHAMCO Service departments are automatically deemed as non-conforming. The purpose of CHAMCO's service is to ensure that the equipment is repaired. All equipment is deemed to be in process of repair/replacement.

This policy ensures that CHAMCO's process for repair/service and distribution is monitored and recorded and that problems and inconsistencies are addressed.

All members of staff involved in the service and distribution of equipment are obligated to report nonconformance.

The **Quality Management Representative** monitors nonconformance reporting and reports major nonconformance to CHAMCO's **Management Team**.

The **Management Team** reviews nonconformance trends during Management Review Meetings.

Nonconformance in any of CHAMCO's procedures are reported, documented and reviewed. Suggestions for progressive and proactive improvements are also documented and reviewed.

8.4 Analysis of Data

CHAMCO collects and analyses data to demonstrate the suitability and effectiveness of this quality management system and to evaluate where continual improvement of the QMS can be made. We review the customer satisfaction survey results and monitor the data received from our review of our QMS, Suppliers and any trends in our processes.

8.5 Improvement

CHAMCO maintains a planned and documented system to correct conditions that adversely affect CHAMCO's Quality Management System and respond to suggestions for continued quality improvement.

Corrective Action Requests and Initiatives are created and reviewed and the resulting actions are documented.

This policy ensures that CHAMCO's Quality Management System can respond to problems and suggestions quickly and efficiently.

All members of staff are responsible for identifying and reporting problems and suggestions for improvements in CHAMCO's Quality Management System. All members of staff are responsible for implementing corrective actions and suggestions for improvement.

The **Quality Management Representative** monitors nonconformance trends and initiates corrective actions accordingly. The Quality Management Representative also reports the status of corrective actions and suggestions for improvement to CHAMCO's **Management Team**.

The **Management Team** reviews corrective action and initiative reports during the Management Review meetings.

Corrective and Suggestions for Improvements

Corrective and Suggestions for Improvements may be initiated by **any staff** member involved in the Quality System or by the **Quality Management Representative**.

Whenever there is a trend in the nonconformance reports, a Corrective Action Request is initiated.

Corrective and Initiative Reports are assigned to the parties responsible. Quarterly reports are distributed and discussed at the general meetings.

All action taken, reviews and approvals are documented.

Reference: QM 15 Continual Improvements