

Quality Management System Manual
Of
Morgan Bros. of Everett Inc.
– dba –
Morgan Aero Products

To meet the requirements of:

AS9100C
&
ISO9001:2008

Approvals

This policy is communicated and implemented at all company levels.

(Signature on file)

Virgil Morgan
President

(Signature on file)

Roger Bell
Vice President of Operations

(Signature on file)

Dana Keene
Quality Assurance Manager

POLICIES AND APPROVALS

SCOPE

Morgan Brothers of Everett, Inc. dba Morgan Aero Products is the parent company of Morgan Aero Products. All reference in this manual and any other quality documents under this standard will refer to Morgan Aero Products.

The full scope of Morgan Aero Products covered under AS9100 includes process cleaning, packaging and marking of oxygen system components for the aerospace industry.

Design and Development EXCLUSION

At this time Morgan Aero Products has no Design department. Morgan Aero Products does not accept purchase orders with a design requirement. At this time however Morgan Aero Products takes exception and excludes section 7.3 of AS9100 from our scope of operation.

QUALITY MANAGEMENT SYSTEM (QMS)

Morgan Aero Products Process Based QMS Flow.

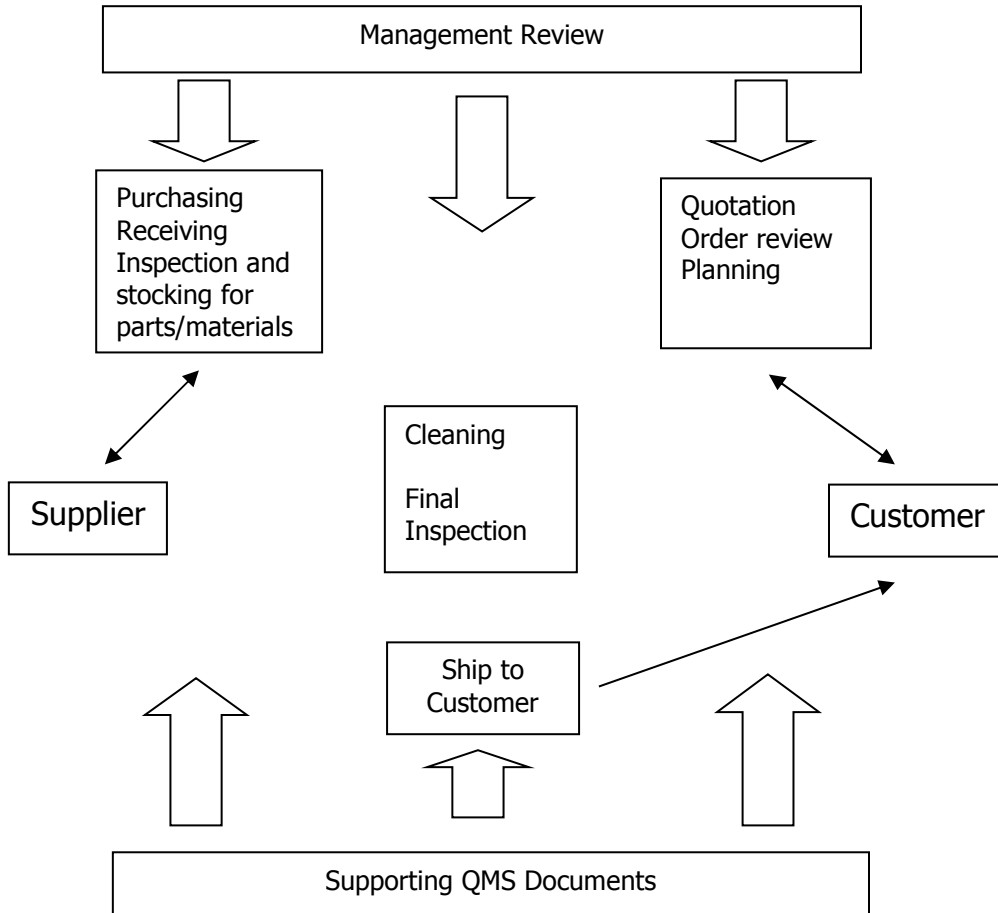


Diagram 1

In addition, two processes interact with the above process based flow-
 1) Monitoring and Improving the Quality Management System, and
 2) Providing capable resources.

See Appendix 1 for additional information on controls, inputs, outputs, measures of performance, and how risk is managed for each process.

Appendix 1, Process Controls.

Process	Controls	Inputs	Outputs	Measures	Risk managed by
Quotations / Order Review / Planning	<ul style="list-style-type: none"> • QP 001 section 5 • QP 001 section 5 & 9 	<ul style="list-style-type: none"> • Customer inquiry/ RFQ • External / customer standards or manufacturer's standards • Customer order 	<ul style="list-style-type: none"> • Quotation • Product accepted for production (OK on fast track or slow track order review.) • Creation of ST-701, ST-702, ST-705, ST-777 or ST-781 work traveler 	<ul style="list-style-type: none"> • Fast track- 1 day turn around and confirmed to price list. • Slow track- 14-day turn around 	<ul style="list-style-type: none"> • Price list maintenance • One contact person for Oxygen • Trained & qualified personnel
Purchasing Receiving Inspection for parts / materials	<ul style="list-style-type: none"> • QP 001 section 7 & 8 • QP 001 section 7,11,12,14, 20 & 24 	<ul style="list-style-type: none"> • External / customer standards • Approved suppliers. • Trained/ Qualified personnel • Inspection standards 	<ul style="list-style-type: none"> • Purchase order. • Addition to PO log • Supplier performance data • Receipt of correct parts, correct quantity • Supplier performance data • Parts qualified to go to stock / issue to job 	<ul style="list-style-type: none"> • PO log maintenance • QF 758 NCR log analysis for corrective action • PO Accuracy 	<ul style="list-style-type: none"> • Supplier evaluations yearly. • Use of customer required approved suppliers • Trained & qualified personnel • Secured pars • Inventory management

Process	Controls	Inputs	Outputs	Measures	Risk managed by
Oxygen Cleaning & Inspection	<ul style="list-style-type: none"> • QP 001 section 9, 10, 11, 13, 14, 15, 18, 19, 20 and QP-002 (hoist) 	<ul style="list-style-type: none"> • Qualified parts • Traveler, and instructions per QP001 sections • Validated processes • Calibrated equipment • Drawings/ specs. • Trained/ Qualified personnel • QP-002 	<ul style="list-style-type: none"> • Parts processed per traveler. • Parts qualified per inspection, and packaged. • Traveler signed off 	<ul style="list-style-type: none"> • QF 758 NCR log analysis for corrective action. • Training Log • Calibration Log 	<ul style="list-style-type: none"> • Maintain validation on cleaning process per BAC requirements. • Maintain equipment. • Trained & qualified personnel • Appropriate inspection • Document control to manage current specifications and traveler requirements. • Maintain calibrations on measurement equipment
Ship Product	<ul style="list-style-type: none"> • QP 001 section 13 	<ul style="list-style-type: none"> • Shipping standards 	<ul style="list-style-type: none"> • Product shipped, with requested paperwork 	<ul style="list-style-type: none"> • Rejection by customer • Customer complaint 	<ul style="list-style-type: none"> • Shipping portion of traveler • Shipping standards

Support processes

Process	Controls	Inputs	Outputs	Measures	Risk managed by
Monitoring and Improving the Quality Management system	<ul style="list-style-type: none"> • Management Review; Management Review Template; Supplier Evaluation; Customer Satisfaction • P 251, 	<ul style="list-style-type: none"> • Schedule • Customer scorecard including complaints • Audit results • Regulatory changes, as required by customers • Analysis of objectives • Prior changes/ tasks assigned by management 	<ul style="list-style-type: none"> • Improvement plans 	<ul style="list-style-type: none"> • Objectives for on time performance, rejections, final inspection acceptance, and warranty claims 	<ul style="list-style-type: none"> • Management knowledge • Customer feedback
Providing Capable Resources.	<ul style="list-style-type: none"> • Training system • Management Review. • Process maintenance • Facility maintenance 	<ul style="list-style-type: none"> • Employee qualifications • Subject matter experts. 	<ul style="list-style-type: none"> • Employee qualification granted • Facility and equipment performance is reliable. 	<ul style="list-style-type: none"> • Error tracking associated with personnel • Audit findings related to facility 	<ul style="list-style-type: none"> • Employee monitoring • Audits for facility integrity.

4.1a General Requirements

Morgan Aero Products has established, implemented, and maintains a quality management system. The Morgan Aero Products QMS is continually monitored to improve its effectiveness in accordance with the current revisions of international standard AS9100 Rev C.

In order to ensure standards compliance Morgan Aero Products has:

- a) Identified the processes needed for the quality management system and their application throughout the organization. See Diagram 1. The direct service processes, and **Additional support processes** are monitoring for the QMS for performance, and ensuring capable resources available for all activities.
- b) Determined the sequence and interaction of these processes. See Diagram 1. Support processes are applied to ALL processes and activities, and are interactive with the Diagram 1 main product delivery processes.
- c) Determined criteria and methods needed to ensure that both the operation and control of these processes are effective. The QP 001 manuals' sections address criteria and methods for operation and control.
- d) Ensured the availability of resources and information necessary to support the operation and monitoring of these processes.
- e) Monitored, or measured, and analyzed all processes.
- f) Implemented actions necessary to achieve planned results and continual improvement of these processes.

All processes are managed in accordance with the requirements of SAE AS9100 Rev C.

Any outsourced process or material that affects product conformity with this QMS is monitored to ensure control over the process or material.

Conformity of out sourced processes or material is identified within this QMS.

4.2 Documentation Requirements

4.2.1 General

Morgan Aero Products documentation includes, but is not limited to, the following:

- a) A quality policy and quality objectives.
- b) A quality manual.
- c) Documented procedures in accordance with AS9100 Rev C.
- d) All required documents for the effective planning, operation and control of Morgan Aero Products processes.
- e) All records and reports required by standards and regulatory agencies and authorities.
- f) Work instructions

All persons requiring access to the Morgan Aero Products QMS including, but not limited to, employees, customers, regulatory agencies and management will be given un-restricted access to the QMS. All employees are made aware of relevant procedures required by the QMS. See QP 001 Section 4.

4.2.2 Quality Manual

Morgan Aero Products has established and maintains a quality manual that includes:

- a) The scope of the QMS including details of and justification for any exclusion.
- b) Documented procedures to accomplish the requirements of customers, regulatory agencies AS9100 Rev C and this QMS.
- c) The description of the interaction between processes of the QMS. See figure 1.

4.2.3 Control of Documents

All documentation required by the AS 9100 standard, and this QMS are controlled, having been established to define the controls needed to:

- a) Approve documents for adequacy prior to issue.
- b) Review and update as necessary and to re-approve documentation.
- c) Ensure changes and the current revision status of documents are identified.

- d) Ensure relevant versions of applicable documents are available at points of use.
- e) Ensure identification and legibility of documents.
- f) Ensure documents of external origin are identified as such and distribution is controlled.
- g) Prevent accidental use of obsolete documents and apply suitable control to obsolete documents if they are retained.
- h) Coordinate document changes for procedures and with customers or regulatory authorities in accordance with contract or regulatory requirements.
- i) Revisions made to Morgan Aero Products Quality Policy Manual will require review and approval by the company president, the Vice President of Operations, and the Quality Assurance Manager.

See QP 001 Section 1

4.2.4 Control of Records

All records required by the Morgan Aero Products QMS are maintained to provide evidence of conformity to requirements and of the effective operation of the QMS. Records are handled per written document control procedures to ensure proper identification, storage, protection, retrieval, retention time, disposition of records and to ensure they remain legible, readily identifiable and retrievable. Records created by and/or retained by suppliers will also apply. Records shall be available for review by customers and regulatory authorities in accordance with contract or regulatory requirements.

See QP 001 Section 2

5.0 MANAGEMENT RESPONSIBILITY

5.1 Management Commitment

Top management has provided evidence of its commitment to the development and implementation of the QMS and improving the QMS effectiveness by:

- a) Communicating to all areas of Morgan Aero Products the importance of meeting customer as well as statutory and regulatory requirements.

- b) Establishing the quality policy.
- c) Ensuring that quality objectives are established.
- d) Conducting in person or by appointment management reviews.
- e) Ensuring the availability of resources.

See QP 001 Section 3

5.2 Customer Focus

The top management of Morgan Aero Products ensures that customer requirements are determined and are met with the aim of enhancing customer satisfaction, sections 7.2.1 & 8.2.1.

5.3 Quality Policy

The top management of Morgan Aero Products ensures that the QMS:

- a) Is appropriate to the purpose of the organization.
- b) Includes a commitment to comply with requirements and continually improve the effectiveness of the QMS.
- c) Provides a framework for establishing and reviewing quality objectives.
- d) Is communicated and understood by all employees within the organization.
- e) Is reviewed for continuing suitability.

5.4 Planning

5.4.1 Quality Objectives:

Morgan Aero Products is committed to meeting the requirements of our customers by:

- a) Customer product rejection rate of zero.
- b) Maintaining a 99% or better final inspection acceptance rate
- c) Maintain an on-time delivery rate greater than 99%.
- d) Maintain warranty claims of zero.

5.4.2 Quality Management System Planning

The upper management of Morgan Aero Products has ensured that the planning of the quality management system is carried out in order to meet the requirements given in section 4.1 as well as the quality objectives. And, that the integrity of the quality management system is maintained when changes are planned and implemented.

5.5 Responsibility, Authority and Communication

5.5.1 Responsibility and Authority

The top management of Morgan Aero Products ensures that the responsibilities and authorities are defined and communicated within the organization.

5.5.2 Management Representative

The top management of Morgan Aero Products has appointed the Quality Assurance Manager as a management liaison who, in addition to any other duties, has the responsibility and authority to/and:

- a) Ensure that processes needed for the quality management system are established, implemented and maintained.
- b) Report to top management on the performance of the quality management system and any need for improvement.
- c) Ensure the promotion of awareness of customer requirements throughout the organization.
- d) The organizational freedom to resolve all matters pertaining to quality.
- e) Will act as liaison with external parties on any matters relating to the QMS.

5.5.3 Internal Communication

Top management ensures that appropriate communication processes are established within the organization.

5.6 Management Review

5.6.1 General

Top management reviews the QMS at bi-annual management review meetings.

See QP 001 Section 3

5.6.2 Review Input

The Management Review input information includes, but is not limited to:

- a) Audit results.
- b) Customer feedback.
- c) Process performance and product conformity.
- d) Status of preventive actions and any outstanding corrective actions.
- e) The status of any follow-up actions from previous management reviews.
- f) Any changes that could impact the QMS.
- g) Any recommendations for improvement.

5.6.3 Review Output

During Management Review meetings appropriate actions will be taken in regards to the following issues:

- a) Improvements to the effectiveness of the QMS and its processes.
- b) Improvements to product relating to customer requirements.
- c) Resource needs.

6.0 RESOURCE MANAGEMENT

6.1 Provision of Resources

Morgan Aero Products has determined and provided the resources needed to:

- a) Implement and maintain the quality management system and continually improve its effectiveness.

- b) Enhance customer satisfaction by meeting customer requirements.

6.2 Human Resources

6.2.1 General

To ensure competence of Morgan Aero Products personnel job descriptions have been prepared that identify the required qualifications for each position that affects product quality. Qualifications may include formal education, acquired skills and experience.

6.2.2 Competence, Awareness and Training

See QP 001 Section 4

6.3 Infrastructure

Morgan Aero Products has determined and will provide and maintain the infrastructure needed to achieve conformity to product requirements.

See QP 001 Section 10

6.4 Work Environment

Morgan Aero Products has determined and manages the work environment needed to achieve product conformity requirements.

See QP 001 Section 10

7.0 **PRODUCT REALIZATION**

7.1 **Planning of Product Realization**

7.1.1 Planning

See QP 001 Section 9

7.1.2 Risk Management

Morgan Aero Products has implemented processes that incorporate practices to manage risk to achieve applicable requirements, including assigning responsibility for managing risks, defining risks, risk assessment and communication, and actions to mitigate risk.

See Appendix 1, this manual

7.1.3 Configuration Management

Morgan Aero Products has established, documented and maintains configuration management process appropriate to our products and processes. Configuration for hoist products is maintained per procedures contained in QP 002. Oxygen product configuration is specified by drawings supplied by customers. Morgan Aero does not modify configuration of the oxygen products serviced, and therefore is responsible for traceability of products as its configuration management process.

7.1.4 Control of temporary off site work transfer

When work is temporarily transferred outside of Morgan Aero Products facility. Morgan Aero Products requires all offload work to be returned through the Morgan Aero Products receiving inspection process, to validate the quality of work.

See QP 001 Section 7

7.2 Customer Related Processes

7.2.1 Determination of Requirements Related to Products

See QP 001 Section 5

7.2.2 Review of Requirements Related to Products

See QP 001 Section 5

7.2.3 Customer Communication

Morgan Aero Products determines and has implemented an effective process for communicating with customers.

See QP 001 Section 5 and 23

7.3 Design and Development

Exclusion taken. See 3.1.1 at the beginning of this manual.

7.4 Purchasing

7.4.1 Purchasing Process

See QP 001 Section 7 & 8

7.4.2 Purchasing Information

See QP 001 Section 7

7.4.3 Verification of Purchased Product

Morgan Aero Products has established and implemented a receiving inspection procedure to ensure that purchased product meets the specified purchase requirements.

See QP 001 Section 12, 19 & 20

7.5 Production and Service Provision

7.5.1 Control of production and service provision

See QP 001 Section 9, 11, 14, & 18

7.5.1.1 Production Documentation

Production operations are carried out in accordance with approved data. This data contains, as necessary:

- a) Drawings, parts lists, process flow charts with inspection operations and production documents to include
 - 1) Manufacturing plans
 - 2) Traveler
 - 3) Work order
 - 4) Process cards
 - 5) Inspection documents
- b) A list of specific or non-specific tools required including specific instructions for their use.

7.5.1.2 Control of Production Process Changes

See QP 001 Section 14

7.5.1.3 Control of Production Equipment, Tools and NC Machine Programs

- a) If required by customer order production equipment, tools and programs are validated prior to use and maintained and inspected periodically according to documented procedures.
- b) First article inspection (FAI) shall be used as production validation, when required by customers. Production validation is accomplished per process, and may serve both purposes.
- c) Morgan Aero Products has established and documented storage requirements and periodic inspections of production equipment and tooling.

7.5.1.4 Control of Service Operations

See QP 002 for hoist operations, applicable to repair/ overhaul of hoists.

7.5.2 Validation of Processes for Production and Service Provision

See QP 001 Section 14

7.5.3 Identification and Traceability

Where appropriate, Morgan Aero Products identifies product by suitable means throughout product realization.

When applicable, Morgan Aero Products maintains the identification of the configuration of the product in order to identify any differences between the actual configuration and the agreed configuration.

When necessary, Morgan Aero Products identifies the product status with respect to monitoring and measurement requirements.

Morgan Aero Products has a documented control procedure for the control of inspection stamps.

For traceability Morgan Aero Products controls and records the unique identification of the product. Section 4.2.4

See QP 001 Section 7, 11 & 19

7.5.4 Customer Property

See QP 001 Section 12

7.5.5 Preservation of Product

The integrity of product is maintained during internal processing and delivery to the intended destination.

See QP 001 Section 9, 11, 14 & 18

7.6 Control of Monitoring and Measuring Devices

Morgan Aero Products has determined the monitoring and measurement to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of product to determined requirements. A documented procedure outlines the process used to ensure that monitoring and measurement to be

carried out are done so in a manner that is consistent with the monitoring and measurement requirements.

See QP 001 Section 15

8.0 MEASUREMENT, ANALYSIS AND IMPROVEMENT

8.1 General

Morgan Aero Products plans and implements the monitoring, measurement, analysis and improvement processes.

These processes are identified in documented procedures and include determination of applicable methods per AS9100 regulations or in some instances customer requirements.

See QP 001 Section 22

8.2 Monitoring and Measurement

8.2.1 Customer Satisfaction

See QP 001 Section 16

8.2.2 Internal Audit

Morgan Aero Products conducts internal audits at planned intervals to determine the QMS:

- a) Conforms to the planned requirements of AS9100 and to the QMS requirements established by Morgan Aero Products.
- b) Is effectively implemented and maintained.

8.2.2.1 Morgan Aero Products has an audit program that has been designed and implemented and identifies an audit schedule.

8.2.2.2 The audit criteria, scope, frequency, methods, responsibilities and requirements for planning and conducting an audit and for reporting and maintaining results are defined and documented.

- 8.2.2.3 Audit results are documented, maintained, and reviewed at the next management review meeting.
- 8.2.2.4 Corrective actions are required for any findings of non-compliance.
- 8.2.2.5 The auditor will follow-up on corrective actions to verify compliance with non-compliance findings.

See QP 001 Section 17

8.2.3 Monitoring and Measurement of Processes

Morgan Aero Products monitors and measures the effectiveness of its QMS using an internal audit process.

See QP 001 Section 18

8.2.4 Monitoring and Measurement of Product

- a) Morgan Aero Products has processes in place to monitor and measure the characteristics of product to verify that product requirements have been met.
- b) Key characteristics are identified, then monitored and controlled.
- c) When sampling is used as an inspection method for product acceptance. The sampling plan precludes the acceptance of lots whose samples have known nonconformities. When required, the plan is submitted for customer approval.
- d) Product is not used until it has been inspected.

8.2.4.1 Inspection Documentation

See QP 001 Section 19 & 24.

8.3 Control of Nonconforming Material

Material, parts, product or customer returned goods that are found to be nonconforming during any inspection operation is identified and controlled to prevent use or delivery.

See QP 001 Section 20

8.4 Analysis of Data

Morgan Aero Products collects and analyzes appropriate data that demonstrates the suitability and effectiveness of the QMS.

See QP 001 Section 21

8.5 Improvement

8.5.1 Continual Improvement

Improvement in the effectiveness of the Morgan Aero Products QMS is achieved through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions, management reviews and continual training and upgrading of employee skills.

See QP 001 Section 22

8.5.2 Corrective Action

Morgan Aero Products takes action to eliminate the cause of nonconformities in order to prevent recurrence. Corrective actions are appropriate to the effects of the nonconformities encountered.

See QP 001 Section 23

8.5.3 Preventive Action

Morgan Aero Products determines action to eliminate the causes of potential nonconformities in order to prevent their occurrence. Preventive actions are appropriate to the effects of the potential problems.

See QP 001 Section 23