Xometry Quality Management System Requirements

Please note that we require all Xometry partners to have a Suitable Quality Management System in place in order to accept work. Our minimum Quality Management System requirements to become / remain an approved partner are:

* Establishment of a written Quality Policy
* Establishment and periodic review of Quality Objectives (i.e. On-Time Delivery, Quality, Communication)
* Contract/Purchase Order Review to determine requirements (i.e. specifications, manufacturing processes, quality, delivery) for products and services
* Measurement Traceability using calibrated equipment
* Control of Documented Information (i.e. record retention, revision control, control of documents)
* Control of Nonconforming Parts
* Corrective Action Process (including root cause identification and documentation)

An example of a QMS that meets these minimum requirements can be found below along with downloadable templates. **Please feel free to modify or adjust these templates to fit the needs that you may have for documentation of your QMS.**

Xometry staff is available at work@xometry.com to provide coaching, materials, and assistance on these requirements.

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## Example Quality Management System Policy

XYZ Machining & 3D Printing LLC

4400 Main Street

Anywhere, USA 12345

**Scope:**

This quality manual contains policies that have been implemented at XYZ Machining & 3D Printing.

This manual details our processes for the manufacture of parts through selection, manufacturing, quality, and delivery while also including procurement and material controls, and processing controls.

**Company Overview:**

XYZ Machining & 3D Printing was founded in 2005. Our main business consists of receiving drawings and/or models from our customers for quotes on parts, providing timely quotes and then building these parts for our customers.

Our Mission at XYZ Machining & 3D Printing is to provide our customers with superior quality and delivery to service their needs by using our expert knowledge of materials and complex manufacturing processes. Management commits that we will:

* Ensure that all employees understand and strive to reach customer expectations, within any statutory or regulatory requirements
* Establish the Quality Management System
* Ensure the specifications set in the Quality Management System are being maintained, and take corrective action if the Quality Management System is not being upheld
* Continuously improve the Quality Management System, and provide the resources to meet new requirements as needed

**Quality Policy:**

It is the policy of XYZ Machining & 3D Printing to:

* Provide industry best Customer Service, OnTime Delivery and Product Quality
* Improve its operational efficiencies in order to drive long term business sustainability and employee and shareholder satisfaction.
* Continuously improve its products and services and the effectiveness of its quality management system.

**Quality Objectives:**

XYZ Machining & 3D Printing Quality Objectives are:

* On-Time Delivery of Orders - 95%
* Off Quality Returns - 1%
* Customer Satisfaction Ratings - 98%

These objectives and performance results are reviewed at a minimum on a quarterly basis.

**Contract / Purchase Order Review:**

There are established procedures for the review of Contracts / Purchase Orders in their entirety (geometry, lead time, material, payment terms, features, precision, post-processing requirements, etc.) and to determine if it is a good fit for our shop.

Questions regarding Contracts / Purchase Orders are resolved as quickly as possible. An appropriate record system should be utilized to maintain order agreements and stipulations for however long is needed per the terms of the agreement or shop certification. All identified risks are mitigated during the contract review phase.

**Control of Monitoring & Measuring Equipment:**

XYZ Machining & 3D Printing determines the monitoring and measurement to be undertaken and the monitoring and measuring equipment needed to provide evidence of conformity of product to determined requirements. We will establish processes to ensure that monitoring and measurement can be carried out and are carried out in a manner that is consistent with the monitoring and measurement requirements.

All measurement equipment is serialized and documented in calibration logs. All measuring equipment is calibrated or verified, at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards. Where no such standards exist, the basis used for calibration or verification is recorded, adjusted or re-adjusted as necessary, identified in order to determine its calibration status, safeguarded from adjustments that would invalidate the measurement result, and protected from damage and deterioration during handling, maintenance, and storage. A copy of our Tool Calibration Forms are shown in the Appendix.

**Control of Documents:**

There are established methods for the development, revision, review, approval, distribution, maintenance and control of all documents. This process ensures that only authorized documents, templates and forms are used, that required documents are available to employees where required and that obsolete copies or revisions are promptly removed, replaced, invalidated or destroyed.

A retention period of 5 years for controlled documented information will be established and as applicable back-ups of electronic documents should be performed.

**Control of Non-Conforming Parts:**

We will ensure that zero non-conforming product is delivered to any of our Xometry’s customers.

There are established procedures to perform the following duties:

* Review of non-conformances
* Perform root-cause analysis to prevent a recurrence
* Determine action needed to deliver the conforming product
* Record all steps taken between detection of non-conformances and resolution

**During Production** - Non-conforming product that is discovered during production is identified and marked with RED dye on the NC part, and then segregated from good parts.

**During In-Process/ First Piece Inspection -** QC identifies Non-conforming product during a first piece or in-process inspection operations and attaches a RED arrow sticker for Non-conformance and notes on the QC report, then informs Production personnel responsible for programming/setup of the part(s) and/or Management.

**During Final Inspection -** QC identifies Non-conforming product during inspection operations, then applies reject disposition in the records. QC then evaluates the part for in-house rework, remake, scrap or to seek customer authorization of the part as-is.

* Determine a course of action if non-conformance is discovered after delivery
* Identification, quarantine, and disposal of the non-conforming product. All Non- conforming product is rendered unusable by cutting or damaging the product and placed in marked bins in the Recycle / Trash bay of the main building.

**Corrective Action Process:**

It is the policy of The XYZ Machining & 3D Printing Company to take action to eliminate the cause of nonconformities in order to prevent their recurrence. We will establish and maintain Quality Standards, Quality Logs to record any Non-conformances, customer complaints, or other quality related issues. The corrective actions will be recorded and reviewed for their effectiveness.

## Appendix: Templates & Resources

## The following are downloadable resources and templates for you to use in developing your own QMS. **Please feel free to modify or adjust these templates to fit the needs that you may have for documentation of your QMS.**

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| --- | --- |
| Templates | Samples |
| [Calibration Log](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry-QMS-Calibration-Log-Template.xlsx) | [Calibration Log](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry-QMS-Sample-Calibration-Log.xlsx) |
| [Contract-Purchase Order Review](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry-QMS-Contract-Purchase-Order-Review-Template.xlsx) | [Contract-Purchase Order Review](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry-QMS-Sample-Contract-Purchase-Order-Review.xlsx) |
| [Quality Policy Poster](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry%20Quality%20Policy%20Poster%20Template.docx) | [Quality Policy Poster](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry-Quality-Policy-Poster-Example.pdf) |
| [Quality Objectives](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry-QMS-Quality-Objectives-Template.xlsx) | [Quality Objectives](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry-Quality-Objectives-Sample.xlsx) |
| [Corrective Action Request](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry-QMS-Corrective-Action-Request-Template.docx) |  |
| [Revision Log](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry-QMS-Revision-Log-Sample-and-Template.xlsx) |  |
| [Work Procedures](https://cdn2.hubspot.net/hubfs/340051/Partner%20Assets/Example%20QMS%20Assets/Xometry-QMS-Work-Procedures-Template.docx) |  |

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