Appendix Q: Qms Templates

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Appendix Q - Quality Management System Templates

This appendix provides practical templates and forms for implementing a Quality Management System (QMS) in a CNC manufacturing environment. These templates can be customized to meet specific organizational needs and industry requirements.

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1. Quality Manual Template

Document Header

```
Company Name: _____
Quality Manual
Document Number: QM-001
Revision: _____
Date: _____
Approved by: _____
```

1.1 Scope of Quality Management System

Purpose: Define the scope and boundaries of the QMS

This Quality Manual describes the Quality Management System of [Company Name] for the design, manufacture, and delivery of precision CNC-machined components for the [aerospace/medical/automotive/general] industry.

Scope:
- Products/Services covered: _____
- Facilities included: _____
- Excluded requirements (with justification): _____
  ISO 9001 Clause 8.3 (Design) is excluded because we manufacture to customer-provided designs only.

Applicable Standards:
[ ] ISO 9001:2015
[ ] AS9100D (Aerospace)
[ ] ISO 13485:2016 (Medical Devices)
[ ] IATF 16949:2016 (Automotive)

1.2 Quality Policy

Quality Policy Statement:

[Company Name] is committed to:
- Meeting or exceeding customer requirements and specifications
- Delivering defect-free products on time
- Continuously improving our processes and systems
- Complying with applicable regulatory and statutory requirements
- Maintaining a culture of quality throughout the organization

This policy is communicated to all employees and reviewed annually.

Signed: _____ Date: _____
(President/CEO)

1.3 Quality Objectives

Annual Quality Objectives:

1. Customer Satisfaction: ____% (target)
2. On-Time Delivery: ____% (target)
3. First Pass Yield: ____% (target)
4. Internal Defect Rate: ____% (target)
5. Supplier Quality: ____% conforming lots (target)
6. Calibration Compliance: ____% on-time calibrations (target)
7. Training Completion: ____% of required training (target)

Objectives are reviewed quarterly in Management Review meetings.

1.4 Process Map

[Include organizational process map showing interactions]

Key Processes:
1. Sales and Order Review (Procedure: PR-001)
2. Purchasing and Supplier Management (Procedure: PR-002)
3. Production Planning (Procedure: PR-003)
4. CNC Machining Operations (Procedure: PR-004)
5. Inspection and Testing (Procedure: PR-005)
6. Nonconforming Product Control (Procedure: PR-006)
7. Corrective and Preventive Action (Procedure: PR-007)
8. Internal Audits (Procedure: PR-008)
9. Management Review (Procedure: PR-009)
10. Document Control (Procedure: PR-010)

---

2. Document Control Forms

2.1 Document Change Request Form

DOCUMENT CHANGE REQUEST

DCR Number: _____ Date: _____

Requested by: _____ Department: _____

Document to be Changed:
Document Number: _____ Title: _____
Current Revision: _____

Type of Change:
[ ] New Document
[ ] Revision to Existing Document
[ ] Obsolete Document

Reason for Change:
_____
_____
_____

Description of Change:
_____
_____
_____

Approval:
Department Manager: _____ Date: _____
Quality Manager: _____ Date: _____
Document Control: _____ Date: _____

New Revision Number: _____ Effective Date: _____

2.2 Document Distribution Log

DOCUMENT DISTRIBUTION LOG

Document Number: _____ Title: _____
Revision: _____ Date Issued: _____

Copy #	Location/Dept	Received By	Signature	Date
1				
2				
3				
4				

Obsolete Copies Collected:

Copy #	Retrieved From	Retrieved By	Date

2.3 Master Document List

MASTER DOCUMENT LIST

Quality Manual: QM-001, Rev ___

Doc #	Title	Current Rev	Date	Next Review
PR-001	Sales and Order Review			
PR-002	Purchasing			
PR-003	Production Planning			
PR-004	Machining Operations			
PR-005	Inspection			
PR-006	Nonconforming Product			
PR-007	Corrective Action			
PR-008	Internal Audits			
PR-009	Management Review			
PR-010	Document Control			
PR-011	Calibration			
PR-012	Training			

3. Procedure Templates

Standard Operating Procedure (SOP) Template

```
[COMPANY LOGO]

Standard Operating Procedure

Document Number: PR-___    |  Revision: ___  |  Page ___ of ___

Title: _____________________________________________________

1.0 PURPOSE
State the purpose of this procedure.

2.0 SCOPE
Define where and when this procedure applies.

3.0 REFERENCES
List related documents, standards, or procedures.
- Quality Manual QM-001
- ISO 9001:2015 Clause ___

4.0 DEFINITIONS
Define key terms used in this procedure.

5.0 RESPONSIBILITIES
Position/Role          | Responsibility
---------------------- | ---------------------------------------
Quality Manager        |
Production Supervisor  |
Operator               |

6.0 PROCEDURE

6.1 [First Major Step]
   6.1.1 Sub-step
   6.1.2 Sub-step

6.2 [Second Major Step]
   6.2.1 Sub-step
   6.2.2 Sub-step

7.0 RECORDS
List records generated by this procedure and retention period.
- Record Name (Form Number) - Retention: ___ years

8.0 REVISION HISTORY
```

Rev	Date	Description of Change	Approved By
A		Initial Release	

Prepared by: _____ Date: _____
Reviewed by: _____ Date: _____
Approved by: _____ Date: _____

---

4. Work Instruction Template

[COMPANY LOGO]

Work Instruction

Document Number: WI-___ | Revision: ___ | Page ___ of ___

Title: _____
Part Number: _____ Part Name: _____

SAFETY REQUIREMENTS:
[ ] Safety Glasses Required
[ ] Hearing Protection Required
[ ] Cut-Resistant Gloves
[ ] Other: _____

TOOLS AND EQUIPMENT REQUIRED:
- CNC Machine: _____
- Fixtures: _____
- Cutting Tools: _____
- Measuring Instruments: _____

MATERIAL SPECIFICATION:
Material: _____ Specification: _____
Raw Stock Size: _____

SETUP INSTRUCTIONS:
Step 1: _____
Step 2: _____
Step 3: _____

MACHINING OPERATIONS:
Op #	Description	Machine	Speed	Feed	Tool
10					
20					
30					

INSPECTION REQUIREMENTS:
See Control Plan: CP-_____ or Inspection Plan: IP-_____

CRITICAL DIMENSIONS (First-Off Inspection):
Dimension	Specification	Gage/Method	Actual	Accept/Reject

NOTES / SPECIAL INSTRUCTIONS:
_____
_____

Approved by: _____ Date: _____

_____

5. Inspection and Testing Forms

5.1 In-Process Inspection Report

IN-PROCESS INSPECTION REPORT

Work Order #: _____ Part Number: _____ Rev: _____
Part Name: _____ Quantity: _____
Operation: _____ Inspector: _____ Date: _____

Characteristic	Specification	Gage	Sample Results	Accept/Reject

Visual Inspection:
[ ] No burrs or sharp edges
[ ] Surface finish acceptable
[ ] No tool marks or damage
[ ] Markings/labels present and correct

Overall Result: [ ] ACCEPT   [ ] REJECT

If rejected, NCR Number: _____

Inspector Signature: _____ Date: _____

5.2 Final Inspection Report

FINAL INSPECTION REPORT

Work Order #: _____ Part Number: _____ Rev: _____
Customer: _____ PO Number: _____
Quantity Inspected: _____ Lot/Serial #: _____
Inspector: _____ Date: _____

Inspection Method:
[ ] 100% Inspection
[ ] Sample Inspection (Sample Size: ____ per AQL ____)

Reference Documents:
[ ] Engineering Drawing: _____
[ ] Control Plan: CP-_____
[ ] Customer Specification: _____

DIMENSIONAL INSPECTION:

Item	Characteristic	Specification	Actual	Result
1				P/F
2				P/F
3				P/F

VISUAL/FUNCTIONAL INSPECTION:
[ ] Surface finish acceptable
[ ] No burrs or sharp edges
[ ] Threads inspected (if applicable)
[ ] Markings correct and legible
[ ] Packaging requirements met
[ ] Documentation complete

NONCONFORMANCES:
[ ] None
[ ] NCR #: _____ (Disposition: _____)

FINAL DISPOSITION:
[ ] ACCEPT - Release to ship
[ ] CONDITIONAL ACCEPT - (Waiver/Deviation #: _____)
[ ] REJECT - Return to production / Scrap

Quantity Accepted: _____ Quantity Rejected: _____

Inspector Signature: _____ Date: _____
QA Manager Approval: _____ Date: _____

5.3 Receiving Inspection Report

RECEIVING INSPECTION REPORT

PO Number: _____ Date Received: _____
Supplier: _____ Packing Slip #: _____
Part Number: _____ Description: _____
Quantity Received: _____ Inspector: _____

INSPECTION CHECKLIST:
[ ] Correct part number and quantity
[ ] Packing list matches PO
[ ] Material certification included (if required)
[ ] No visible damage to packaging or parts
[ ] Correct revision level

INSPECTION RESULTS:
Requirement	Specification	Sample Size	Result	P/F

DISPOSITION:
[ ] ACCEPT – Received into inventory
[ ] CONDITIONAL ACCEPT – (Note: _____)
[ ] REJECT – Return to supplier (NCR #: _____)

Quantity Accepted: _____ Quantity Rejected: _____
Lot/Batch #: _____ Location: _____

Inspector Signature: _____ Date: _____

_____

6. Nonconforming Material Report (NCR)

NONCONFORMING MATERIAL REPORT

NCR Number: _____ Date Opened: _____
Initiated by: _____ Department: _____

PART IDENTIFICATION:
Part Number: _____ Rev: _____ Part Name: _____
Work Order/Lot #: _____ Quantity Affected: _____
Customer: _____ PO Number: _____

LOCATION OF NONCONFORMANCE:
[ ] Receiving Inspection
[ ] In-Process (Operation #: ____)
[ ] Final Inspection
[ ] Customer Return
[ ] Internal Audit

[ ] Other: _____

DESCRIPTION OF NONCONFORMANCE:
_____
_____
_____

Reference Documents:
Drawing: _____ Specification: _____ Control Plan: ____

Detected by: _____ Date: _____

CONTAINMENT ACTION (Immediate):
[ ] Parts segregated and tagged
[ ] Production stopped
[ ] Similar parts inspected (WO #s: _____)
[ ] Customer notified

Containment by: _____ Date: _____

DISPOSITION (Material Review Board):
[ ] USE AS-IS (Justification required)
[ ] REWORK (See rework procedure: _____)
[ ] REPAIR (Customer approval required: [ ] Yes [ ] No)
[ ] RETURN TO SUPPLIER
[ ] SCRAP

Justification for Use-As-Is or Repair:
_____
_____

Customer Approval (if required):
Approved by: _____ Date: _____

DISPOSITION APPROVAL:
Quality Manager: _____ Date: _____
Engineering (if required): _____ Date: _____
Customer (if required): _____ Date: _____

REWORK/REPAIR INSTRUCTIONS:
_____
_____

Rework performed by: _____ Date: _____
Re-inspection by: _____ Date: _____
Re-inspection result: [ ] ACCEPT [ ] REJECT

CORRECTIVE ACTION:

CAR Number: _____ (if root cause analysis required)

NCR Closed by: _____ Date: _____

_____

7. Corrective Action Request (CAR)

CORRECTIVE ACTION REQUEST

CAR Number: _____ Date Opened: _____
Initiated by: _____ Department: _____

SOURCE OF PROBLEM:
[ ] Internal Audit Finding
[ ] Customer Complaint
[ ] Nonconforming Product (NCR #: _____)
[ ] Process Variation
[ ] Supplier Issue
[ ] Other: _____

PROBLEM DESCRIPTION:
_____
_____
_____

Frequency: [ ] One-time occurrence [ ] Recurring issue
Parts/Processes Affected: _____

CONTAINMENT ACTION (Immediate):
_____
_____
Completed by: _____ Date: _____

ROOT CAUSE ANALYSIS:
Method Used: [ ] 5 Whys [ ] Fishbone [ ] Fault Tree [ ] Other: ____

Why #1: _____
Why #2: _____
Why #3: _____
Why #4: _____
Why #5: _____

ROOT CAUSE (Verified):
_____
_____

CORRECTIVE ACTION PLAN:

Action	Responsible	Target Date	Status

PREVENTIVE ACTION (To prevent recurrence in other areas):
_____
_____

IMPLEMENTATION:
Actions completed by: _____ Date: _____

EFFECTIVENESS VERIFICATION:
Verification Method: _____
Verification Period: _____
Verification Results: _____
_____

[ ] EFFECTIVE – Corrective action successful
[ ] NOT EFFECTIVE – Additional action required (New CAR: _____)

Verified by: _____ Date: _____

CAR Closed by: _____ Date: _____

_____

8. Internal Audit Forms

8.1 Internal Audit Schedule

INTERNAL AUDIT SCHEDULE
Year: _____

Month	Process/Area	ISO Clause	Auditor	Status	Report #
Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					

| Dec | | | | | |

Notes:
- All processes audited at least once per year
- High-risk areas audited more frequently
- Schedule updated as needed based on performance

Prepared by: _____ Date: _____

8.2 Internal Audit Report

INTERNAL AUDIT REPORT

Audit Number: _____ Date: _____
Auditor(s): _____
Auditee(s): _____

AUDIT SCOPE:
Process/Area: _____
ISO 9001 Clauses: _____
Documents Reviewed: _____

OPENING MEETING:
Date/Time: _____ Attendees: _____

AUDIT FINDINGS:

FINDING #1: [ ] Major NC [ ] Minor NC [ ] Observation [ ] Positive
Clause: _____
Description: _____
_____
Evidence: _____
_____

FINDING #2: [ ] Major NC [ ] Minor NC [ ] Observation [ ] Positive
Clause: _____
Description: _____
_____
Evidence: _____
_____

[Continue for additional findings...]

SUMMARY:
Total Findings: ___
- Major Nonconformances: ___
- Minor Nonconformances: ___
- Observations: ___

- Positive Findings: ___

CLOSING MEETING:
Date/Time: _____ Attendees: _____

Auditor Signature: _____ Date: _____
Auditee Signature: _____ Date: _____

CORRECTIVE ACTION RESPONSE:
(Attach CAR forms for each nonconformance)
Target completion date: _____

8.3 Internal Audit Checklist (Sample - ISO 9001 Clause 8.5 Production)

INTERNAL AUDIT CHECKLIST
ISO 9001:2015 Clause 8.5 - Production and Service Provision

Process/Area: CNC Machining Department
Date: _____ Auditor: _____

#	Question	Y/N/NA	Evidence	Comments
1	Are documented work instructions available at workstations?			
2	Are operators trained and qualified for their tasks?			
3	Is production equipment calibrated and maintained?			
4	Are production activities monitored and measured?			
5	Are inspection and test status clearly identified?			
6	Is product protected during production?			
7	Are special processes validated (if applicable)?			
8	Is traceability maintained where required?			
9	Are customer-supplied materials controlled?			
10	Are changes to production controlled?			

FINDINGS:
_____
_____

Auditor Signature: _____ Date: _____

_____

9. Management Review Template

MANAGEMENT REVIEW MEETING
Date: _____ Location: _____ Chair: _____

ATTENDEES:
[ ] President/CEO

[ ] Quality Manager
[ ] Operations Manager
[ ] Engineering Manager
[ ] Sales/Customer Service Manager
[ ] Other: _____

REVIEW INPUTS (ISO 9001 Clause 9.3.2):

1. STATUS OF ACTIONS FROM PREVIOUS REVIEW:

Action Item	Responsible	Status	Due Date

2. CHANGES IN INTERNAL/EXTERNAL ISSUES:
   - Market conditions: _____
   - Regulatory changes: _____
   - Technology changes: _____

3. INFORMATION ON QMS PERFORMANCE:

   a) Customer Satisfaction:
      - Survey results: ____% satisfied
      - Complaints: ____ (trend: [ ] Up [ ] Down [ ] Stable)
      - On-time delivery: ____%

   b) Process Performance:
      - First pass yield: ____%
      - Cycle time: ____
      - Scrap rate: ____%

   c) Product Conformity:
      - Defects per million: ____
      - Customer returns: ____
      - NCRs issued: ____

4. RESOURCE ADEQUACY:
   - Personnel: [ ] Adequate [ ] Needs attention
   - Equipment: [ ] Adequate [ ] Needs attention
   - Facilities: [ ] Adequate [ ] Needs attention
   - Comments: _____

5. EFFECTIVENESS OF ACTIONS FOR RISKS/OPPORTUNITIES:
   - Risk mitigation actions: _____
   - Opportunity actions: _____
   - Effectiveness: [ ] Effective [ ] Needs improvement

6. IMPROVEMENT OPPORTUNITIES:
   _____

_____

7. INTERNAL AUDIT RESULTS:
   - Audits completed: _____ of _____ planned
   - Major NCs: _____ Minor NCs: _____ Observations: _____
   - Trends: _____

8. CORRECTIVE ACTION STATUS:
   - Open CARs: _____ Overdue: _____
   - CARs closed: _____ Average closure time: _____ days

9. SUPPLIER PERFORMANCE:
   - Suppliers evaluated: _____
   - Issues: _____

10. EXTERNAL PROVIDER PERFORMANCE:
    - Heat treat, plating, testing, etc.: _____

REVIEW OUTPUTS (ISO 9001 Clause 9.3.3):

1. IMPROVEMENT OPPORTUNITIES:

Opportunity	Action	Responsible	Target Date

2. NEED FOR CHANGES TO QMS:
   [ ] No changes needed
   [ ] Changes required: _____

3. RESOURCE NEEDS:

Resource	Justification	Budget	Approval

4. QUALITY OBJECTIVES REVIEW:
   [ ] Objectives being met
   [ ] Objectives revised: _____

DECISIONS AND ACTION ITEMS:

Item	Action	Responsible	Due Date	Status

NEXT REVIEW DATE: _____

Meeting Minutes Prepared by: _____ Date: _____
Approved by: _____ (President/CEO) Date: _____

---

10. Control Plan Template

```
CONTROL PLAN

Part Number: _____ Rev: _____ Part Name: _____
Customer: _____ Date: _____
Process Engineer: _____ Page ___ of ___

| Op | Process/Operation | Characteristic | Spec/Tol | Measurement Method | Sample Size/Fre
|----|-------------------|----------------|----------|--------------------|-
-----------------|----------------|---------------|
| 10 | Receiving | Material cert | Per spec | Review cert | 100% | Accept/Reject | Reject lot
| 20 | Rough turning | OD | 2.000+/-0.010 | Micrometer | First/last + 1/hr | SPC chart | Adju
| 30 | Drilling | Hole depth | 3.500+/-0.005 | Depth gage | First + 1/10 pcs | First-
off + periodic | Stop, adjust tool, NCR |
| 40 | Threading | Thread fit | 1/2-13 UNC | Thread plug gage | 100% | Go/No-
go | Rework or scrap |
| 50 | Final inspection | All dims | Per drawing | Per inspection plan | 100% | Final accept/

SPECIAL CHARACTERISTICS:
□  Critical characteristic (affects safety/function)
▲ Major characteristic (affects fit/performance)

CONTROL METHOD CODES:
SPC - Statistical Process Control
100% - 100% inspection
Sample - Sample inspection per AQL

Prepared by: _____ Date: _____
Approved by: _____ Date: _____
```

---

11. First Article Inspection Report (FAIR)

```
FIRST ARTICLE INSPECTION REPORT (AS9102)

FAIR Number: _____ Date: _____
Part Number: _____ Rev: _____ Part Name: _____
Customer: _____ PO/Contract: _____
Serial/Lot Number: _____ Quantity Manufactured: _____

REASON FOR FAIR:
[ ] First production run
[ ] Engineering change
[ ] Manufacturing process change
```

[ ] Tooling change
[ ] Supplier change
[ ] Production restart after 2+ years

INSPECTION METHOD:
[ ] Actual measurement
[ ] Objective evidence (certs, test reports)
[ ] Supplier data

CHARACTERISTIC ACCOUNTABILITY TABLE:

Char #	Characteristic	Drawing Req	Actual Result	Method	Accept/Reject
1	Length	100.0+/-0.1	99.95	Caliper	A
2	Width	50.0+/-0.1	50.03	Caliper	A
3	Height	25.0+/-0.05	25.02	Micrometer	A
4	Hole dia	12.7+/-0.05	12.68	Pin gage	A
5	Surface finish	Ra 1.6 max	Ra 1.2	Profilometer	A

[Continue for all characteristics on drawing...]

FUNCTIONAL TEST RESULTS:
[ ] Not required
[ ] Passed (Test report #: _____)
[ ] Failed

MATERIAL CERTIFICATION:
Material: _____ Specification: _____
Cert Number: _____ Date: _____
Traceability: Heat/Lot #: _____

SPECIAL PROCESS CERTIFICATIONS:
[ ] Heat treatment - Cert #: _____
[ ] Plating - Cert #: _____
[ ] NDT - Cert #: _____

FINAL RESULT:
[ ] APPROVED - All characteristics conform
[ ] APPROVED WITH WAIVER - (Waiver #: _____)
[ ] REJECTED - Nonconformances require correction

Inspector: _____ Date: _____
Quality Manager: _____ Date: _____
Customer Approval: _____ Date: _____

ATTACHMENTS:
[ ] Engineering drawing

```
[ ] Dimensional results (Form 3)
[ ] Material certifications
[ ] Special process certifications
[ ] Functional test reports
[ ] Other: _____
```

---

12. Supplier Quality Forms

12.1 Supplier Evaluation Form

```
SUPPLIER EVALUATION

Supplier Name: _____ Date: _____
Address: _____
Contact: _____ Phone: _____ Email: _____
Products/Services Supplied: _____

EVALUATION CRITERIA:

1. QUALITY (Weight: 40%)
   Score (1-5): ____
   - Product conformance to specifications
   - Certification/test reports provided
   - Defect rate: ____%
   Comments: _____

2. DELIVERY (Weight: 30%)
   Score (1-5): ____
   - On-time delivery rate: ____%
   - Lead time consistency
   - Emergency response capability
   Comments: _____

3. COST (Weight: 15%)
   Score (1-5): ____
   - Competitive pricing
   - Payment terms
   - Cost stability
   Comments: _____

4. SERVICE (Weight: 15%)
   Score (1-5): ____
   - Responsiveness
   - Technical support
   - Problem resolution
   Comments: _____
```

TOTAL SCORE: ____/5.0

RATING:
[ ] 4.5–5.0: Preferred Supplier
[ ] 3.5–4.4: Approved Supplier
[ ] 2.5–3.4: Conditional Supplier (improvement required)
[ ] <2.5: Not Approved (find alternate)

RECOMMENDATION:
[ ] Continue using
[ ] Increase business
[ ] Reduce business
[ ] Require corrective action
[ ] Discontinue use

Action Items:
_____
_____

Evaluated by: _____ Date: _____
Approved by: _____ Date: _____

12.2 Supplier Corrective Action Request (SCAR)

SUPPLIER CORRECTIVE ACTION REQUEST

SCAR Number: _____ Date Issued: _____
Supplier: _____
Contact: _____ Email: _____ Phone: _____

PROBLEM DESCRIPTION:
PO Number: _____ Part Number: _____
Date Received: _____ Quantity Affected: _____
NCR Number (if applicable): _____

Description of Nonconformance:
_____
_____
_____

Impact: [ ] Production stopped [ ] Customer affected [ ] Minor issue

REQUIRED RESPONSE FROM SUPPLIER:

1. IMMEDIATE CONTAINMENT ACTION (within 24 hours):
   - Describe actions taken to prevent shipping more defective material
   - Expected response: _____

2. ROOT CAUSE ANALYSIS (within 5 days):
   - What caused the problem?
   - Why was it not detected before shipping?

3. CORRECTIVE ACTION PLAN (within 5 days):
   - Actions to prevent recurrence
   - Implementation timeline
   - Verification method

4. EFFECTIVENESS VERIFICATION (within 30 days):
   - How will effectiveness be verified?
   - Verification results

SUPPLIER RESPONSE:

Containment Action:
_____
Date completed: _____

Root Cause:
_____
_____

Corrective Action:

Action	Responsible	Target Date	Status

Preventive Action:
_____

BUYER VERIFICATION:
Response received: [ ] Yes [ ] No Date: _____
Response adequate: [ ] Yes [ ] No

[ ] ACCEPTED - Corrective action acceptable
[ ] NOT ACCEPTED - Additional action required
[ ] SUPPLIER AUDIT REQUIRED

Follow-up date: _____

Issued by: _____ Date: _____
Closed by: _____ Date: _____

_____

13. Calibration Records

13.1 Calibration Schedule

CALIBRATION SCHEDULE
Year: _____

Gage ID	Description	Location	Cal Interval	Last Cal	Next Due	Status
MIC-001	0-1" Micrometer	Insp	12 months			
MIC-002	1-2" Micrometer	Insp	12 months			
CAL-001	6" Digital Caliper	Mach 1	12 months			
PIN-001	Pin Gage Set 0.25"	Insp	12 months			
THR-001	Thread Plug Gage	Insp	12 months			

Status Codes:
[check] = Current
! = Due soon (within 30 days)
✗ = Overdue

Updated by: _____ Date: _____

13.2 Calibration Record

CALIBRATION RECORD

Gage ID: _____ Description: _____
Manufacturer: _____ Model: _____ Serial #: _____
Range: _____ Resolution: _____ Accuracy: _____
Location: _____

Calibration Date: _____
Calibration Due Date: _____
Calibration Interval: _____
Calibration Method: [ ] In-house [ ] Outside lab

CALIBRATION STANDARD USED:
Standard ID: _____ Cal Date: _____ Cert #: _____
Traceability: [ ] NIST [ ] Other: _____

AS-FOUND CONDITION:
[ ] In Tolerance
[ ] Out of Tolerance (Investigation required - CAR #: _____)
[ ] Damaged

AS-FOUND READINGS:
| Test Point | Standard | As-Found | Error | Tolerance | P/F |

|------------|----------|----------|-------|-----------|-----|
| | | | | | |
| | | | | | |

ADJUSTMENT/REPAIR:
[ ] No adjustment needed
[ ] Adjusted (Details: _____)
[ ] Repaired (Details: _____)

AS-LEFT READINGS:
Test Point	Standard	As-Left	Error	Tolerance	P/F

CALIBRATION RESULT:
[ ] PASS - Return to service
[ ] LIMITED USE - (Restrictions: _____)
[ ] FAIL - Remove from service

Calibrated by: _____ Date: _____
Reviewed by: _____ Date: _____

CALIBRATION LABEL APPLIED:
Label #: _____ Next Cal Due: _____

_____

14. Training Records

14.1 Employee Training Matrix

EMPLOYEE TRAINING MATRIX
Department: _____ Year: _____

| Employee | Position | QMS Overview | GD&T | CMM Operation | CNC Setup | Safety | Audit |
|----------|----------|--------------|------|---------------|-----------|--
------|-------|
| | | [ ] Req [ ] Done | | | | | |
| | | | | | | | |

Training Status:
[check] = Completed
P = Planned
R = Required

Updated by: _____ Date: _____

14.2 Training Record

TRAINING RECORD

Employee Name: _____ ID: _____
Position: _____ Department: _____

Training Course: _____
Trainer: _____ Date: _____
Duration: _____ Location: _____

TRAINING TYPE:
[ ] Initial qualification
[ ] Recurrent training
[ ] Procedure change
[ ] New equipment
[ ] Corrective action related

TRAINING CONTENT:
_____
_____
_____

TRAINING METHOD:
[ ] Classroom instruction
[ ] On-the-job training
[ ] Self-study
[ ] Computer-based
[ ] External course

EVALUATION:
[ ] Written test (Score: ____%)
[ ] Practical demonstration
[ ] Observation
[ ] No formal evaluation

RESULT:
[ ] QUALIFIED - Employee demonstrates competence
[ ] NOT QUALIFIED - Additional training required

Comments: _____

Trainer Signature: _____ Date: _____
Employee Signature: _____ Date: _____
Supervisor Approval: _____ Date: _____

Record filed in employee training folder: [ ]

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15. Customer Complaint Form

```
CUSTOMER COMPLAINT FORM

Complaint Number: _____ Date Received: _____
Received by: _____ Method: [ ] Phone [ ] Email [ ] Letter

CUSTOMER INFORMATION:
Customer: _____
Contact: _____ Phone: _____ Email: _____

PRODUCT INFORMATION:
Part Number: _____ Rev: _____ Part Name: _____
PO Number: _____ Invoice Number: _____
Date Shipped: _____ Quantity Shipped: _____
Lot/Serial Number: _____

COMPLAINT DESCRIPTION:
_____
_____
_____

Type of Complaint:
[ ] Dimensional nonconformance
[ ] Material defect
[ ] Surface finish/cosmetic
[ ] Late delivery
[ ] Incorrect quantity
[ ] Wrong part shipped
[ ] Damage in shipment
[ ] Documentation error
[ ] Other: _____

Severity:
[ ] CRITICAL - Safety issue, production stopped
[ ] MAJOR - Significant impact, sortation required
[ ] MINOR - Minimal impact

Customer Request:
[ ] Return for credit
[ ] Replacement parts
[ ] Rework/repair
[ ] Price adjustment
[ ] Information only

IMMEDIATE RESPONSE (within 24 hours):
```

Contact: _____ Date/Time: _____
Action Taken: _____
_____

INVESTIGATION:
NCR Number: _____ CAR Number: _____
Root Cause: _____
_____

CORRECTIVE ACTION:
_____
_____
Target Completion: _____

CUSTOMER NOTIFICATION:
Method: [ ] Phone [ ] Email [ ] Formal response letter
Date: _____ Contacted by: _____
Customer Satisfied: [ ] Yes [ ] No

CLOSURE:
[ ] Complaint resolved to customer satisfaction
[ ] Corrective action verified effective
[ ] Preventive action implemented

Closed by: _____ Date: _____

---

16. Process Capability Study Template

PROCESS CAPABILITY STUDY

Part Number: _____ Rev: _____ Part Name: _____
Characteristic: _____ Specification: _____
Process: _____ Date: _____
Study Conducted by: _____

STUDY PARAMETERS:
Sample Size: _____ (minimum 30 pieces)
Sample Frequency: _____
Time Period: _____ to _____
Machine: _____ Operator: _____ Shift: _____

DATA COLLECTION:

Sample	Measurement	Sample	Measurement	Sample	Measurement
1		11		21	
2		12		22	

3		13		23	
4		14		24	
5		15		25	
6		16		26	
7		17		27	
8		18		28	
9		19		29	
10		20		30	

STATISTICAL ANALYSIS:
USL (Upper Spec Limit): _____
LSL (Lower Spec Limit): _____
Nominal: _____
Tolerance: _____

Mean ($\bar{X}$): _____
Standard Deviation (σ): _____
Range (R): _____

CAPABILITY INDICES:
Cp = (USL - LSL) / (6σ) = _____
Cpk = min[(USL - $\bar{X}$)/(3σ), ($\bar{X}$ - LSL)/(3σ)] = _____

Pp = (USL - LSL) / (6σ) = _____
Ppk = min[(USL - $\bar{X}$)/(3σ), ($\bar{X}$ - LSL)/(3σ)] = _____

INTERPRETATION:
Cpk >= 1.67 : Excellent capability
Cpk >= 1.33 : Adequate capability
Cpk >= 1.00 : Marginal capability (monitoring required)
Cpk < 1.00 : Inadequate capability (action required)

RESULT: Cpk = _____
[ ] CAPABLE - Process meets requirements
[ ] NOT CAPABLE - Improvement required

HISTOGRAM / CONTROL CHART:
[Attach histogram and control chart]

COMMENTS / RECOMMENDATIONS:
_____
_____
_____

Studied by: _____ Date: _____
Reviewed by: _____ Date: _____

17. Gage R&R Study Template

```
GAGE REPEATABILITY & REPRODUCIBILITY STUDY
(ANOVA Method)

Part Number: _____ Characteristic: _____
Specification: _____ Tolerance: _____
Gage: _____ Gage ID: _____
Study Date: _____ Study Conductor: _____

STUDY PARAMETERS:
Number of Operators: ____ (typically 3)
Number of Parts: ____ (typically 10)
Number of Trials: ____ (typically 3)

OPERATORS:
Operator A: _____
Operator B: _____
Operator C: _____

DATA COLLECTION:
| Part | Operator A | Operator A | Operator A | Operator B | Operator B | Operator B | Operato
|    | Trial 1 | Trial 2 | Trial 3 | Trial 1 | Trial 2 | Trial 3 | Trial 1 | Trial 2 | Trial 3 |
|------|---------|---------|---------|---------|---------|---------|---------|-------
--|---------|---------|
| 1   |       |       |       |       |       |       |       |       |
| 2   |       |       |       |       |       |       |       |       |
| 3   |       |       |       |       |       |       |       |       |
| 4   |       |       |       |       |       |       |       |       |
| 5   |       |       |       |       |       |       |       |       |
| 6   |       |       |       |       |       |       |       |       |
| 7   |       |       |       |       |       |       |       |       |
| 8   |       |       |       |       |       |       |       |       |
| 9   |       |       |       |       |       |       |       |       |
| 10  |       |       |       |       |       |       |       |       |

ANOVA CALCULATIONS:
(Use statistical software or AIAG MSA manual formulas)

Equipment Variation (EV) = _____
Appraiser Variation (AV) = _____
Repeatability & Reproducibility (R&R) = √(EV^2 + AV^2) = _____
Part Variation (PV) = _____
Total Variation (TV) = √(R&R^2 + PV^2) = _____

GAGE R&R PERCENTAGES:
%EV = (EV/TV) × 100 = _____%
%AV = (AV/TV) × 100 = _____%
```

```
%R&R = (R&R/TV) × 100 = _________%

Number of Distinct Categories (ndc) = __________

ACCEPTANCE CRITERIA:
%R&R < 10%: Excellent measurement system
%R&R 10-30%: Acceptable (may be marginal)
%R&R > 30%: Unacceptable - improvement required
ndc >= 5: Adequate discrimination

RESULT:
[ ] ACCEPTABLE - Gage suitable for use
[ ] MARGINAL - Use with caution, monitor
[ ] UNACCEPTABLE - Do not use, improvement required

RECOMMENDATIONS:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Conducted by: _____________________________ Date: __________
Reviewed by: _____________________________ Date: __________
```

Document Control Information

```
Appendix Q - QMS Templates
Revision: A
Date: __________
Approved by: _____________________________

These templates are provided as guidance and should be customized to meet
specific organizational and customer requirements.

All forms should be reviewed annually and updated as needed to maintain
alignment with current standards and processes.
```

Notes on Template Usage

1. **Customize**: Modify templates to match your specific processes and requirements
2. **Document Control**: Assign document numbers and control revisions
3. **Electronic Forms**: Consider implementing in QMS software for easier tracking
4. **Training**: Ensure personnel are trained on proper use of forms
5. **Records**: Maintain completed forms per record retention requirements
6. **Audit**: Periodically verify forms are being used correctly
7. **Update**: Keep templates current with standard revisions (ISO 9001, AS9100, etc.)