What AS 9100 Rev C Requires

A High Level View

Note: There are 188 shall statements in AS 9100C, this high level view does not cover them in detail (Design and Development (7.3) is not included in this outline)

AS9100 Rev C includes all the requirements of ISO 9001:2008
ISO 9001:2008 requirements are in plain type
Additional requirements, specific to AS9100 are in ***bold italics***

1. Determine the processes needed meet customer requirements (ie, sales, purchasing, production, shipping/receiving, training, maintenance, etc) (4.1)
2. If any process is outsourced, determine how that outsourced process will be controlled (4.1)
3. Describe how those processes relate to each other, how those processes are managed, explain what is measured for each process to allow effective management of the process. (4.1 b,c)
4. Provide the resources needed for each process to be effective (4.1 d)
5. Make sure the processes achieve the results that were planned. (4.1 e,f)
6. Have a quality manual (4.2.2)
7. Control the documents used by the quality management system (4.2.3)
8. Control the records used by the quality management system, ***control the records that are created by or retained by your suppliers*** (4.2.4)
9. Top management must show commitment to the QMS (5.1)
10. ***Determine what your customer wants and deliver it on time (5.2)***
11. ***Measure how you are doing regarding product conformity and on-time delivery, take action if planned results are not going to be met (5.2)***
12. Establish a quality policy that is understood by all employees (5.3)
13. Establish quality objectives that are relevant to your customers (5.4.1)
14. Plan how your company will go about meeting customer requirements (5.4.2)
15. Make sure employees understand their responsibilities, with regards to the quality management system (5.5.1)
16. Have a management representative who will make sure the system remains effective. (5.5.2)
17. Communicate within your organization about how your QMS is doing (5.5.3)
18. Management must periodically review/evaluate the quality management system (5.6)
19. Make sure employees are competent/qualified to do the tasks required of them, keeps records (6.2.1/6.2.2)
20. Make sure that the tools, equipment, workspace, etc needed to meet customer requirements are provided. (6.3/6.4)
21. Create and improve your process for delivering what your customers want (7.1)
22. ***When appropriate, take a project management approach to meeting customer requirements, take risk into consideration*** *(7.1.1)*
23. ***Have a process for assessing and managing risks related to meeting customer requirements*** *(7.1.2)*
24. ***Have a process for managing product configuration, when appropriate (7.1.3)***
25. ***Have a process for controlling work transferred outside the organization(7.1.4)***
26. Identify your customers requirements (7.2.1)
27. Review your customers requirements before accepting the order (7.2.2)
28. Create process for customer communication (7.2.3)
29. The requirements of Design and Development (7.3) are not covered in this outline
30. Make sure what you purchase meets your requirements (7.4.1)
31. Manage your suppliers, have an approved vendor list *(including scope of approval)*, periodically evaluate your suppliers, ***use the evaluations to determine what level of control is needed (7.4.1)***
32. ***Evaluate/manage risk when selecting and using vendors (7.4.1)***
33. ***Maker sure your vendors have all the information they need to meet your requirements (7.4.2)***
34. ***Flow down appropriate requirements from your customers to your vendors. (7.4.2)***
35. Make sure what you buy meets your requirements (7.4.3)
36. Make sure that production is carried out under controlled conditions. (7.5.1)

37. Have a process for controlling how changes to production process will be made (7.5.2.1)
38. Define how equipment or tooling will be stored 7.5.1.3
39. If your customer requires it, make sure that product is uniquely identified as you make it (7.5.3)
40. Make sure that as you make product you can always determine the state of inspection (7.5.3)
41. Establish controls for acceptance media (ie. stamps) (7.5.3)
42. If your customer requires it, make sure you have a system that permits you trace all the sources used in your parts. (7.5.3)
43. If you have any customer property, take care of it, and if you loose it or damage it, inform your customer (7.5.4)
44. Make sure that as you make and ship product it is not damaged (7.5.5)
45. Make sure that all tools and equipment used for monitoring and measuring (gages, calipers, etc) are calibrated to NIST sources, maintain the records of calibration (7.6)
46. Maintain a register of monitoring/measuring equipment; include specifics such as method of calibration and acceptance criteria. (7.6)
47. Ensure proper environmental conditions for calibration and inspection (7.6)
48. Have a process for the recall of monitoring/measuring equipment for calibration(7.6)
49. Periodically determine whether your customers believe you are meeting all their requirements and act on what you learn. ***Determine the effectiveness of the actions taken. (8.2.1)***
50. Do periodic internal audits to see if you are meeting all the requirements of AS 9100, of your own quality management system (what you said you would do in your quality manual and quality system procedures, ***and customer contractual requirements) (8.2.2)***
51. Effectively fix any problems uncovered during the audits (8.2.2)
52. Figure out ways to determine/ensure that the processes (see item #1 above) are effective (8.2.3)
53. Monitor and measure the products you make to make sure customer requirements are met (8.2.4)
54. ***Acceptance requirements will include: criteria for acceptance/rejection, what operations testing will follow, records to be kept, specific test equipment to be used, how to be used (8.2.4)***
55. When there is product that does not meet customer requirements (ie. defects) identify those items and segregate them so they cannot be used. Determine what you will do with the nonconforming product, keep records of nonconforming products and what you did with it (8.3)
56. ***Nonconformances are to be handles in a timely manner (8.3)***
57. Periodically review and analyze information about:
    a) what your customers think about how your company is doing (8.4)
    b) how good you are doing at meeting product requirements (8.4)
    c) how good the processes identified in #1 above are doing (8.4)
    d) how good your suppliers are doing (8.4)
58. Overall the performance of the quality management system needs to get better over time. ***Improvement activities are to be monitored for effectiveness*** (8.5.1)
59. When there are nonconformances, figure out what went wrong, fix it, and then follow up at a later time to see if the fix was permanent. Keep records. ***Determine ahead of time what will be done if corrective actions are not effective (8.5.2)***
60. ***If a supplier is responsible for problems, flow down corrective action requirements to the supplier (8.5.2)***
61. Determine where problems could happen, and prevent them from happening, keep records. (8.5.3)

Documentation Requirements

- documented statements of a quality policy and quality objectives;
- a quality manual
  - scope of the QMS
  - reference to the documented procedures
  - description of the interaction of the QMS processes
- documented procedures required by this International Standard
- documents needed *by the organization* to ensure the effective planning, operation and control of its processes, and
- records required by this International Standard
- AS 9100 specifically requires the organization to have "documented procedures" for the following six activities:

  4.2.3 Control of documents

  4.2.4 Control of records

  8.2.2 Internal audit

  8.3 Control of nonconforming product

  8.5.2 Corrective action

  8.5.3 Preventive action

Records required by AS9100 Rev C (Without Design, Clause 7.3)

Clause	Record required
5.6.1	Management reviews
6.2.2 e)	Education, training, skills and experience
7.1 d)	Evidence that the realization processes and resulting product fulfill requirements
7.2.2	Results of the review of requirements related to the product and actions arising from the review
7.4.1	Results of supplier evaluations and any necessary actions arising from the evaluations
7.5.2 d)	To demonstrate the validation of processes where the resulting output cannot be verified by subsequent monitoring or measurement
7.5.3	The unique identification of the product, where traceability is a requirement
7.5.4	Customer property that is lost, damaged or otherwise found to be unsuitable for use
7.6 a)	Basis used for calibration or verification of measuring equipment
7.6	Results of calibration and verification of measuring equipment
8.2.2	Internal audit results and follow-up actions
8.2.4	Indication of the person(s) authorizing release of product.
8.3	Nature of the product nonconformities and any subsequent actions taken, including concessions obtained
8.5.2 e)	Results of corrective action
8.5.3 d)	Results of preventive action