

ELMET TECHNOLOGIES LLC - SPECIFICATION

DEPARTMENT: **QUALITY**

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SPECIFICATION: **S-22-100** REVISION: **(2)**

TITLE: **GENERAL QUALITY ASSURANCE FLOWDOWN CLAUSES & STANDARDS**

CONTROLLED COPIES: **NONE**

1. PURPOSE / SCOPE

Elmet suppliers that impact quality are critical business partners that can have serious positive or negative impacts on Elmet products, including the potential to create positive or negative impacts with Elmet customers. This letter is intended to communicate Elmet requirements and expectations for earning and maintaining approved supplier status for materials, products and some critical services.

2. GENERAL APPROVAL REQUIREMENTS FOR PRODUCTS AND SERVICES

- 2.1 A signed Confidentiality Disclosure Agreement or Mutual Non-Disclosure Agreement on file with Elmet.
- 2.2 A valid Vendor Maintenance Form and W9 on file form with Elmet.
- 2.3 A completed, current Supplier Quality Management System Survey/Audit on file with Elmet.
- 2.4 Copies of any current quality management system certificates, if any (ISO 9001, AS9100, NADCAP, etc) on file with Elmet.
- 2.5 Quality, Safety, and Ethics – Elmet encourages suppliers to communicate to supplier personnel how their work contributes to product quality and product safety throughout the life cycle of the product. The importance of ethical behavior and potential impacts to customers, the supplier and Elmet should also be communicated. Ethical behavior includes full compliance with labor laws, environmental, safety, and other legal and regulatory requirements.

3. GENERAL QUALITY CLAUSES

1. Methods, processes and equipment used for Elmet orders will be approved on a case-by-case basis. In most cases, no specific requirements will exist. Any specific requirements may be covered in a supplier audit and/or an Elmet specification or other instruction, and will be referenced in the Elmet purchase order.
2. The release of products and services – Unless otherwise specified, suppliers are allowed to release products and services after relevant self-inspection and/or tests unless there are other specific requirements for delivering data to Elmet in advance or an Elmet source inspection is required.
3. Competency of supplier personnel – Unless otherwise specified, there are no special requirements, other than our expectation that each supplier provide adequate training and work instructions, and to monitor personnel performance and match personnel to each purchase order to meet the requirements. The most common special case would be for “Special Processes” as called out in AS9100 (e.g., NDT, Heat Treating, Welding).
4. Supplier interactions with Elmet – each supplier is expected to ask questions if the PO requirements are not clear, and to report non-conformities when they occur. Rework or repair of non-conformities may require Elmet and/or Elmet customer approvals, so reporting first is important.
5. Supplier Performance – Elmet monitors quality performance of critical suppliers. You may receive supplier performance reports, and, in cases where performance is not meeting expectations, Elmet may ask for improvement actions.

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6. Verification or validation activities by Elmet at the supplier – When specified in the purchase order, Elmet and/or Elmet customer may perform specific verification or validation activities at the supplier (e.g., process witness or source inspection). The specific verification or validations will be explained in the purchase order.
7. Design and Development control – in the rare case where Elmet may request supplier support in design and development, Elmet will provide specific expectations for validating the design and development work.
8. Special requirements, critical items, or key characteristics – Elmet will include requirements for these, when they apply, in the Elmet purchase order.
9. Tests, inspections and verifications - In some cases Elmet will delegate authority to the supplier to perform certain tests, inspections and/or other verifications. This delegation authority is noted in the supplier approval file. These typically involve inspections and/or tests that the supplier is qualified to perform, and is impractical or not possible for Elmet to perform.
10. Statistical techniques – For some products or services, Elmet may require statistical techniques to be applied for controlling the process and/or for reporting results. These typically involve stable processes with high volume quantities where 100% inspections are neither practical nor added-value.
11. Quality Management System - The supplier shall establish a system of internal quality controls sufficient to assure that all items, materials, and services submitted to the Buyer conform to contract and Purchase Order requirements, whether manufactured or processed by the supplier, or procured from subcontractors or sub-tier suppliers. The supplier shall perform any inspections and/or tests necessary to substantiate product conformance to drawing, specification, or Purchase Order requirements. Elmet encourages its suppliers to become compliant with the requirements of ISO-9001(current revision) and to utilize those guidelines as the basis for their internal Quality Management System.
12. Right of Access – Elmet shall have right of access to supplier facility and any subcontracted supplier facility, to monitor processes and records as needed. This access extends to Elmet customers and/or regulatory authorities when applicable, at all levels of the supply chain.
13. Records – Unless otherwise specified, the supplier shall maintain adequate records of all required inspections and tests, including such records or certifications provided to the Seller by its suppliers, for at least 7 years after final payment, unless otherwise specified.
14. Measuring and Test Equipment: The supplier shall provide and maintain any measuring and test equipment necessary to assure that items and materials conform to requirements. To assure continued accuracy, such equipment shall be regularly checked for accuracy, and precision equipment shall be calibrated at established intervals against certified standards traceable to the National Institute of Standards and Technology (NIST). Elmet encourages its suppliers to utilize the guidelines of ISO 10012 (current revision) as a model for maintaining inspection equipment and tools.
15. Control of Nonconforming Material: The supplier shall establish and maintain an effective and positive system for identifying, segregating, and controlling material found not to conform to requirements. An initial report to the Buyer of any material considered for MRB action is required within 2 business days of rejection. Unless otherwise agreed upon with customer-approved procedure, rework, repairs, or use-as-is dispositions are not allowed without customer approval.
16. Unauthorized Subcontracting - The supplier shall not subcontract work, or processing (including that required by drawing or specification), or procure materials to be supplied to the Buyer (other than raw

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materials or catalog items), or release technical information included with the Request for Quotation or Purchase Order, to other subcontractors or sub-tier suppliers without specific written approval of Elmet.

17. Counterfeit Parts, Materials and Work - The supplier's Certification of Conformance represents that the shipment does not contain any suspect or known Counterfeit Part, Material, or Work, and ensures that parts, material or work are procured only through Original Equipment Manufacturers (OEMs)/Original Component Manufacturers (OCMs) or their Franchised Distributors or Authorized Supplier. Any use of other than an Authorized Supplier requires Elmet written approval prior to procurement and use, which shall be contained within the deliverable data package. The supplier shall verify the procurement source and associated certifying documentation. Supplier's receiving inspection process shall utilize incoming inspection or test methods, or both, to detect potential counterfeit parts, material or work. Per Elmet QMS procedures supporting AS9100D, 8.7.1, any counterfeit or suspect counterfeit parts in Elmet's possession will not be returned to the supplier for any reason.
18. Change control, notification and approval – Elmet is a manufacturer and understands that some changes in personnel, equipment and processes need to occur as part of normal operations and to support continuous improvement. Unfortunately, changes are also the root cause of virtually every quality problem. There are some orders, also, that require more strict controls due to Elmet customer flowdown requirements. Due to these situations, Elmet requires suppliers to notify Elmet of the following changes in writing at least 60 days prior to plans to implement:
 - a. Change in raw material supply
 - b. Change in production location (different facility)
 - c. Changes that may affect form, fit, or function of the final product
 - d. Other changes that Elmet's customer requires approval for (when specified in purchase order)
 - e. Changes a through d above require Elmet approval prior to implementing
19. Test specimens – for some orders test specimens may be required for design approval, inspection/verification, investigation or auditing. Suppliers shall provide test specimens, appropriately marked and/or identified, with documented traceability to raw material and supplier processes.
20. Calibration Services – *Suppliers providing calibration services shall be accredited to ISO 17025. Depending on the use of the gage or instrument to be calibrated, the scope of accreditation may need to include this specific gage or instrument type and method required.*

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5. REVISIONS AND APPROVALS

REV	DATE	ORIGINATOR	CHANGES
-	6/1/17	D. Drinan	Initial issue
1	12/1/17	D. Drinan	Revised 12. Right of Access and 17. Counterfeit parts.
2	03/29/19	D. Drinan	Added 20. Calibration Services

APPROVER	SIGNATURE
D. Drinan	