



VERTIV GLOBAL SUPPLIER QUALITY MANUAL

DESCRIPTION AND AUTHORIZATION PROCESS:

Document Name: Vertiv Global Supplier Quality Manual

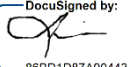
Document ID: 1000.01

Document Owner: Mayuri Bhawar
Deputy Manager, Quality

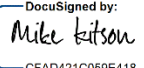
Type: Global Policy

Approved By:

Cub Marion, VP Quality

DocuSigned by:
 06-03-2019
86BD1D87A904438...

Mike Kitson, CPO

DocuSigned by:
 06-04-2019
CFAD421C059E418...

Issued By: Supplier Quality

VERSION HISTORY:

Version	Effective Date	Description
V1.0	May 31, 2019	Initial release



Table of Contents

1. Introduction	3
2. Vertiv Supplier Quality Policy	3
3. Scope	4
4. Purpose	4
5. Order of Precedence	5
6. Definitions	6
7. Requirement for Supplier Approval	6
8. Process for new supplier Qualifications	8
9. Requirements for Purchased Part Approval Process	10
10. Supplier Deliverables	11
11. Supplier Quality Management System	13
12. Supplier Performance Expectation	17
13. Supplier Scorecard and Business Review Meetings	19
14. Supplier Non- conformance requirements	20
15. Warranty Claims	20
16. Repair	20
17. Document and Revision Control	21
18. Customer Property	21
19. Packaging Requirements	22
20. Package identification and Packing list requirements	23
21. Freight Compliance	25
22. Part Identification Requirements	25
23. Deviation Request	26
24. Product Change Notifications	26
25. Compliance and Disclosure Requirements	26
26. Agency Compliance Requirements	27
27. Other Requirements	28
28. Unique Requirements for Contract Manufacturer	28
29. Regional Requirements	31
30. Appendix A	33

1. Introduction.

VERTIV is committed to maximizing customer satisfaction through continuous improvements in the quality, timeliness and value of our products and services. VERTIV recognizes the key role that Suppliers play in our company's success and therefore it is our intent to only partner with Suppliers that can consistently demonstrate a commitment to quality and continuous improvement. Adherence to the requirements in this manual will demonstrate this commitment.

To achieve and maintain commitments, VERTIV has embarked upon a journey of continual performance improvements under the banner of **“Master Quality Improvement Plan”**.

The **“Master Quality Improvement Plan”** is an on-going commitment by VERTIV to provide products and services to the highest quality standards and the best value to our customers

The following is a list of key concepts of **“Master Quality Improvement Plan”**.

- Customer Focus
- Leadership
- Valuing Associates and Partners
- Agility: Flexibility and Speed
- Factual Approach to Decision Making
- Public Responsibility and Citizenship
- Systems Perspective
- Process Approach
- Continuous Improvement

It is expected that these concepts will guide the behavior and thinking of all associates at all levels of the organization. It is also expected that our Suppliers as “valued partners” will embrace these concepts and contribute to the performance improvements that impact VERTIV Customers and provide increasing value to their organization.

2. Vertiv Supplier Quality Policy

Vertiv Supplier Quality Policy is defined & strongly driven by the following management principle and behaviors:

- Build a mutually profitable relationship with our suppliers, ensuring long-term success, through the understanding of customer need.
- Achieve and encourage suppliers to aim our commitments for quality, cost, and schedule.
- Enhance the use of best preventive practices at all levels and ensure reliable risk management.

- Drive continual improvement at supplier for controlled processes, well-defined measurements, best practices, and customer satisfaction.

“DO IT RIGHT THE FIRST TIME”

3. Scope.

- A. This document defines the quality and environmental requirements for all Suppliers who design or manufacture products for VERTIV. A Supplier’s acceptance of a purchase order from VERTIV for products or services indicates acceptance of the requirements in this document.

4. Purpose.

- A. VERTIV is committed to continuous product quality improvement. Our management team is convinced that only with these programs can we survive in today’s competitive world market. Therefore, we have prepared this manual as a guide to help you, as our valued supplier, to achieve product and service improvements. With your assistance, we can now assure never-ending improvement in the product quality and value that we both provide our customers.

This standard is provided to enable our suppliers to understand the basis of VERTIV quality expectations. It establishes minimum quality requirements for all suppliers of materials and services whether they are being provided by the Supplier directly or are purchased through sub-suppliers for use in VERTIV products.

The standard is a supplement to other terms and conditions covered by VERTIV drawings and purchasing documents. This does not replace or alter any of the terms, conditions, and engineering drawings or specification requirements stated in those documents.

Unless explicitly stated on a written VERTIV Purchase Order, all terms and conditions within this manual apply to all purchase orders from VERTIV.

A.1 Suppliers are our Partners

VERTIV is committed to the development of a close working relationship with its Supplier community toward the objectives of receiving products/services that meet requirements, achieve best cost, and delivered on time. We want to develop stable, long-term relationships with Suppliers who are responsive to our requests, maintain high quality, inventory management techniques, and provide increasing value to VERTIV and its customers.

This manual has been developed to ensure communication and understanding of VERTIV’s expectations, and to ensure that all materials and services furnished to VERTIV comply with all contract/purchase order requirements, drawing specifications, required quality standards, and applicable environmental standards.

This requires that each Supplier have a structured quality system that ensures compliance. The emphasis of VERTIV's Supplier Quality Manual is based on defect prevention rather than defect detection.

Defect prevention is achieved through sound quality planning, proven process capabilities and use of meaningful statistical process control techniques to reduce variability within the specification.

While there are many types of control and reporting procedures, it is important for each Supplier to select the optimum procedures for their applications.

A key factor in the partnership with Suppliers is the communication between the partners regarding any kind of change.

Specifically, any kind of change or modification in the Supplier's product or process must be submitted to VERTIV for approval to make sure it follows the product specifications and it will not affect VERTIV's product performance.

A.2 Suppliers are fully responsible for the Quality of their product

The concepts included in the VERTIV Supplier Quality Manual are designed to assist Suppliers in promoting continuous improvement in quality and productivity that will mutually benefit both the Suppliers and VERTIV.

By application of the principles outlined in this manual, the Supplier will be able to provide the quality products necessary for mutual success and to satisfy the increasing expectations of VERTIV customers.

The Supplier is responsible for the quality of the products delivered. Therefore, Supplier may be asked to cover all costs sustained by VERTIV to manage the Supplier's defective material both in the plants and in field unless otherwise contractually agreed.

5. Order of Precedence.

In general, the order of precedence for requirements stated in this document when conflicts exist are as follows from the highest level down:

- Approved VERTIV deviation or waiver
- VERTIV purchased part bill of material and drawing
- Purchasing contract between Supplier and VERTIV
- VERTIV Purchase Order
- Applicable industry and agency compliance standards
- This document

6. Definitions.

- A. **ASL (Approved Supplier List) / AVL (Approved Vendor List):** A listing of VERTIV part numbers and the Suppliers that are approved to sell these part numbers to VERTIV or its affiliates.
- B. **Catalog part:** A purchased part designed by the Supplier or one of its affiliates. Typically, a standard offering of the Supplier sold to customers other than Vertiv.
- C. **Conflict Minerals:** Conflict minerals are minerals mined in conditions of armed conflict and human rights abuses.
- D. **CLP (Classification, Labeling and Packaging of chemicals):** The European Union directive (1272/2008) sets the rules for classification and labeling of chemicals.
- E. **Contract manufacturer:** An approved VERTIV Supplier who builds custom parts or subassemblies.
- F. **Custom part or subassembly:** A purchased part or subassembly designed by Vertiv that is subcontracted to one or more Suppliers.
- G. **VSAC Audit:** A standardized Vertiv Supplier Audit Checklist tool used by VERTIV to grade the Supplier's quality system.
- H. **Material Certificate:** A Material Certificate is a written statement from the Supplier certifying that the purchased parts are made from the materials listed in the certificate.
- I. **Material Declaration:** A full disclosure of all substances included in the product.
- J. **REACH (Registration, Evaluation, Authorization, and Restriction of Chemical substances):** European Community Regulation on chemicals designed to improve the protection of human health and the environment through better and earlier identification of the intrinsic properties of chemical substances.
- K. **RoHS (Restriction of Hazardous Substances):** The European Union directive that restricts the use of certain hazardous substances in electrical and electronic equipment.
- L. **Second tier Supplier:** A second tier Supplier is defined as a Supplier that provides purchased parts or services to VERTIV's primary Supplier. The primary Supplier purchases components or subassemblies from second tier Suppliers and ships completed purchased parts to VERTIV's end customer or to VERTIV.
- M. **Shall:** The word "shall" indicates a mandatory requirement.
- N. **Should:** The word "should" indicates a preferred requirement that is generally expected of all VERTIV Suppliers.

7. Requirement for Supplier Approval

- A. VERTIV employs an Approved Supplier List and will only conduct business with approved Suppliers. There may be exceptions which may be permitted through prior approval by SQA head.
- B. VERTIV greatly prefers to conduct business with Suppliers that are certified to a quality management system standard such as ISO 9001, ISO/TS 16949, TL 9000, etc. In rare cases VERTIV may conduct limited business with a Supplier that lacks these certifications, but the Supplier shall show evidence of a robust quality management system in lieu of, registration.

-
- C. Suppliers must agree to comply with the Vertiv Supplier Code of Conduct, which defines VERTIV's expectations in the areas of ethics, human rights, labor practices and environmental stewardship. Supplier must agree to acknowledge and agree to comply with the Vertiv Supplier Code of Conduct via Vertiv's annual conflict minerals and supplier outreach program.
- C.1 VERTIV prefers to conduct business with Suppliers that are compliant to the requirements of the international SA8000 standard for social accountability.
- D. An approved Supplier shall have one or more of the following criteria met depending upon the type of commodity or service purchased:
- D.1 An acceptable audit score using the Vertiv Supplier Audit Checklist (VSAC) tool.
- D.2 VERTIV approval of a completed VERTIV Supplier survey.
- D.3 Quality System Implementation (ISO 9001 or equivalent industry standard)
- E. Additional requirements for approved Suppliers may include:
- E.1 Passing a process audit by VERTIV Supply Chain Engineers and/or Quality personnel
- E.2 Meeting product performance requirements specified in industry standards
- E.3 Ability to comply with agency listing requirements (UL, CSA, etc.)
- E.4 Meeting the Rejection PPM and On Time Delivery Targets
- F. Suppliers must maintain a code of conduct or a policy that addresses general ethical issues and responsibility, and maintains a process for employees to report concerns.
- F.1 Supplier should provide the code of conduct or policy to Vertiv for review. The supplier's legal or compliance department would likely be the correct contact.
- G. Supplier must maintain a human rights policy that addresses child labor, forced labor, human trafficking, working hour and wage laws, and non-discrimination.
- G.1 Supplier should provide the policy to Vertiv for review. The supplier's legal or compliance department would likely be the correct contact.
- H. Supplier must prohibit corruption, including bribes, kickbacks, or other improper payments, with binding rules for all employees.
- H.1 Supplier should provide the program documents to Vertiv for review. The supplier's legal or compliance department would likely be the correct contact.
- I. VERTIV Europe prefers to conduct business with Suppliers that are ISO 18001 or ISO 45001 accredited.

Evidence of a similarly robust safety process may suffice.

8. Process for New Supplier Qualification

A. Supplier Preliminary Information.

To assess the Supplier's potential, Procurement will ask for data relating to the organizational structure, the business volume, the reference market and Quality System and Environmental Requirements. Based on the gathered preliminary information, the Commodity Manager will make the first preliminary evaluation (if needed conduct visit) and will then decide if next qualification steps will be performed with the Supplier, involving R&D, Quality, and Supply Chain.

Each VERTIV's Division, can adopt specific "Supplier Preliminary Information Questionnaire".

It is to be noted that all information collected from supplier as described above and further in this document, will be deemed confidential and used within VERTIV only. VERTIV will ensure this information is not shared to other parties other than relevant customers using the product or service.

B. Supplier Quality System Assessment (1st Visit)

If the outcome of the first evaluation is positive, Quality/Supply Chain, may contact the Supplier to arrange an audit to check the company Quality System (VERTIV Supplier Audit Checklist –VSAC).

The result of the Quality System assessment performed using the VSAC, depends on the compliance level found. The requirements set forth in this check list are the ones considered important by Vertiv and common for all Suppliers.

The audit result will be shared with Supplier – who will be involved in the undertaking of any necessary corrective action – and will be reported in the Audit result.

Supplier is APPROVED for score equal to 70 or more

Supplier is CONDITIONALLY APPROVED for score between 60 and 69.

Supplier is NOT APPROVED for score lower than 60

VERTIV leading auditor has right to assign conditional approval for an audited Supplier that is below 60. In these specific cases, prior Approval from SQA head and a firm action plan to improve the scores to minimum qualifying marks within a specified time frame is required.

In case of CONDITIONALLY APPROVED, a corrective action and implementation plan shall be submitted to reach the proper score (70 or more).

Corrective action shall be presented within 1 month after an audit and implemented within reasonable timeframe, which must be approved by leading auditor.

If Supplier has scored 70 or more, an improvement plan may be requested from the Supplier to keep the “continual improvement” approach.

The VSAC result will be an attachment of the supply contract or to the supplier Terms & Conditions; this means that VERTIV expects that everything audited and scored in VSAC will be a condition to be qualified as a VERTIV Supplier.

In instances where Supplier’s Quality System will be changed reducing VSAC score for one or more items, Supplier shall inform VERTIV, and VERTIV needs to re-visit the impact, and decide if it is necessary to perform a new VSAC audit.

C. Prototyping Phase – Technical Approval

Once the Supplier’s preliminary assessment phases are over, the prototyping activity will begin.

Procurement/Supply Chain, in cooperation with Engineering and Quality, will submit all the technical documentation necessary to thoroughly define product and prototype technical specifications.

Prototypes will be produced by Supplier, sent to VERTIV where they are properly checked and tested.

The manufactured parts will be checked for the conformity and will also be subjected to all the tests considered necessary by Engineering.

In case of positive result, Procurement/Supply Chain, will communicate to the Supplier to start the sample production of said product based on the agreed methods (standard production process) and volumes.

This phase is skipped in cases where the product is a Supplier’s standard product.

D. Samples Preparation and Process Audit (2nd visit)

If needed, Quality will arrange a Process Audit at the Supplier’s site during sample production to check the stability of the production process set up for VERTIV product. The process audit will be carried out using a specific check list.

In case of severe non-conformity is found during the audit, Supplier can start the mass production under FORMAL DEVIATION limited in time or quantity approved by VERTIV, and a corrective action plan shall be submitted and implemented within a reasonable timeframe, which must be approved by leading auditor.

E. Sample check and Functional Test

The manufactured parts will be checked for conformity. In case of conforming samples, Procurement will authorize the Supplier to get ready for the mass production of the product based on the agreed methods and volumes.

F. Shared Assessment of the Supplier

If, based on Prototyping phase, Product sample checks and process audit, Quality deems it necessary, a new Supplier's process audit can be carried out to check the possible follow up of the requested improvement actions or to understand the reason of minor non- conformity found in the samples.

When all previous phases are completed, VERTIV will express its own assessment about the suitability of the Supplier for supplying the component. Based on these elements, Procurement, Quality, Supply Chain and Engineering, will express their assessment on the Supplier's acceptability. Procurement will then have the duty to inform the Supplier and (in case of positive assessment) to sign the Commercial agreement.

G. Quality Agreement

At completion of the New Supplier Qualification Process, Supplier will be asked to agree and sign a Quality Agreement (QA) and/or Master supplier agreement. Quality will be part of the contract and will define the quality levels required to the Supplier by VERTIV in terms of Acceptable Quality level, as well as the measures VERTIV will take in case of delivery of non-conforming material in terms of recharge of Non-Quality costs (Internal Quality and Field Quality).

The targets will be defined for Internal Quality (quality detected at VERTIV plants before shipment to the customer for finished goods and spare parts) and for Field Quality (quality detected in field during the warranty period after start-up at customer site).

9. Requirements for Purchased Part Approval Process

- A. Typical production part approval requirements based on the type of purchased part and design status are listed below in Table 1.
- B. In specific cases the VERTIV Quality and Engineering department can adjust requirements applicable for any given purchased part approval.
- C. Additional Purchased Part Approval Requirements:

C.1 PPAP samples shall be built on production equipment (unless prior approval is obtained from VERTIV Supplier Quality)

C.2 First article and PPAP samples should be clearly labeled on the shipping container and unit container in large font text on a brightly colored label (not a white label).

Table 1: Typical Production Part Approval Requirements

Typical Submission Type by Purchased Part complexity			
Requirement	Custom Part	Custom Assembly (Existing Design)	Custom Assembly (New Design)
Part submission warrant	Yes	Yes	Yes
Dimensional Data	Yes	Yes	Yes
Approved supplier list verification	-	Yes	Yes
Visual Inspection Record to Vertiv OR Approved Supplier Standards	Yes	Yes	Yes
Material Certificate(s)	Yes	Yes	Yes
Process Flow	-	Yes	Yes
Manufacturing / Assembly Instructions	-	Yes	Yes
Electrical Test Plan	-	Yes	Yes
Control Plan	Yes	Yes	Yes
Measurement System Analysis / Gauge R & R	-	Yes	Yes
PFMEA	-	-	Yes
Capability Studies on CTQ	Yes	Yes	Yes
Agency Compliance Documentation	-	Yes	Yes
Sample Part (s)	Yes	Yes	Yes
** 'Yes' denotes typically required.			

Note : “Vertiv Supplier Quality will specify whether a PPAP is required and what components of PPAP are to be included”.

10. Supplier Deliverables

Suppliers will be required to submit the following documentation (each VERTIV’s Division can use specific form) at various points in the process:

A. Part/ Process Change Request

Reference section 9 for requirements

B. Initial Sample Inspection Report (ISIR) on First Article Sample (FAI) (applicable for custom made parts)

ISIR will be required for any new part, or when Part/ Process Change Requests are submitted.

C. Engineering Deviations

Reference section 10.8 for requirements

D. VERTIV Supplier Audit Checklist (VSAC) observations will be issued to the Supplier once audit has been completed. In case of score between 60 and 69 (CONDITIONALLY APPROVED), Supplier will be responsible for responding with planned corrective actions.

E. Supplier Corrective Action Request form. (SCAR) : This form could be used when specific Critical Non-Conformity is found at VERTIV' facilities. Critical in terms of:

- NC involves safety matter
- STOPPED Production
- Critical for customer
- NC difficult to find in standard production/test process
- NC pieces involve complete same lot, or a major part of the lot,
- Repetitive NC in limited period
- It requires a "very long time" to fix the problem
- Other cases for any reasons considered "Serious" due to linked costs' recovery from supplier.

Reference section 10.10 for requirements regarding Corrective Actions.

F. Product/Part/process change Request & Initial Sample Inspection Report

10.1 Product/Part/Process change Request & Initial Sample Inspection Report

The Part / Process Change Request Shall be submitted by Supplier to request changes to the fit, form, and function of products supplied to VERTIV. This request shall be submitted prior to any changes to any product or process. Once approved, the requirements for First Article sample approval described below will take effect.

The Supplier shall submit First Article sample to VERTIV for approval prior to full production each time any of the following occurs:

- New Part
- Engineering Change Notice affecting dimensions, materials, processes, or function.
- Drawing Revisions implementing characteristics with impact on VERTIV application.
- Changes in Tooling (repair or modification) or Processing.
- Tooling Transfer to another location (whether same company or new Supplier).
- Change in Manufacturing Location – Changes in the location of manufacturing require 8-week MINIMUM

notice.

First Article sample Shall be made from production tooling. Parts made by any method other than from production tooling are not to be submitted as Initial Production Samples. Prototype or short-run tooling samples are not acceptable for ISIR, except when approved by VERTIV Engineering department.

A First Article sample will consist of one (1) part completely checked by the Supplier for every part drawing dimension and related specification. Additional samples may be requested by the VERTIV Supplier Quality Engineer.

All First Article samples submitted by the Supplier, shall be accompanied by the following documentation described on table in chapter 9.1

The Supplier will forward the completed Initial Sample Inspection Report, associated documentation, including drawing with numbered characteristics and samples to the VERTIV Quality Dept.

In case Supplier found one or more non-conformity, ISIR Shall be sent to Engineering department (copy to Quality) for approval following the section 11.8 of this manual (Engineering deviation request). Shipment of the “approve under deviation” parts will be done only after written approval from Engineering team.

Acceptance of the initial production samples does not relieve the Supplier of the responsibility of continuing to produce material which meets drawing requirements and Engineering specifications.

In cases of rejections, or “Limited quantity by exemption” allowed by Engineering deviation, the Supplier will be required to make the correction(s) specified on the ISIR and resubmit new samples with the required documentation prior to shipment of production parts or expiration of the “Limited quantity by exemption”.

NOTE: It is the total responsibility of the Supplier to ensure that no production parts are shipped to a VERTIV plant without ISIR/FAI approval, or in quantities that exceed authorized “Limited Quantity by exemption”.

If additional information is required, contact the VERTIV Procurement Department.

11. Supplier Quality Management System

11.1 Supplier Responsibility

Each Supplier shall establish and maintain systems to assure that all materials and services supplied to VERTIV will meet the specifications established by the purchase order and drawing requirements.

The Supplier has the responsibility to develop and maintain an effective system for control of product quality

manufactured, utilizing defect prevention through the application of statistical process control and daily controls (lean manufacturing principles).

Individual Supplier's quality manuals can vary based upon the type of product manufactured and production process utilized.

Supplier shall keep a centralized list of all delivered products with serial number and lot number to ensure reliable traceability. Upon request, this list shall be provided to VERTIV in a timely manner.

The minimum requirements expected from a Supplier's quality programs are shown in following sections.

11.2 Quality Plan

The Supplier's formal quality plan for products and services supplied to VERTIV shall be fully documented.

This plan is to be internally reviewed at a specified time interval and revised as required. This documentation shall include a definition of each established control system, written procedures delegating responsibilities and directing performance for each quality assurance operation, and descriptions and instructions for all forms employed.

11.3 Control of Subcontracted Product and Services

Each Supplier is responsible for ensuring that all products and services it purchases conform to VERTIV specifications and requirements. Each Supplier shall establish procedures to carry out this responsibility using one or both methods listed below:

- A. By receipt from Sub-Suppliers of satisfactory statistical certification indicating both statistical control and statistical capability to VERTIV specifications.
- B. By performing (or purchasing) the required inspection and testing at adequate frequencies to assure conformance to VERTIV specifications and performing appropriate statistical analysis, if required. The Supplier shall initiate corrective action with Sub-Suppliers on nonconforming products. Evidence of such inspection shall be submitted to VERTIV upon request.

11.4 Gage Control and Calibration

The Supplier shall provide and maintain adequate gages and other measuring and testing devices as necessary, to provide for adequate process control.

The Supplier Shall develop and implement a written plan to verify the accuracy of the devices at sufficiently frequent intervals to ensure continued accuracy/calibration. This plan shall be documented. All measuring and test equipment, including production tools and fixtures used as a medium of inspection, shall be calibrated to measurement standards. Control records are to be maintained listing location, date, results of the last inspection,

and date of the next scheduled inspection.

11.5 Manufacturing Control

- A. Supplier shall have a system to inspect and test material during processing to assure all characteristics meet requirements. Any characteristics controlled or affected by the operation shall have written inspection frequencies established for operators and/or inspectors. The established frequencies should be based upon the Supplier's experience in controlling the process.
- B. The manufacturing control system should include provisions for the isolation of suspected defective material. Reworked material shall be re-inspected or retested.
- C. The Supplier shall have a lot traceability system that provides for the identification, shipment history, and lot numbers (Date Codes) of any suspect products. This information shall be provided on a timely basis once any non-conforming condition is identified as being shipped to VERTIV.

11.6 Product Status Control

The Supplier shall identify the qualification and test status (accept, reject, sort, hold for rework, etc.) of product through all stages of the process by means of stamps, tags, routing cards, colors, codes, or other effective control devices. Positive controls shall be developed to ensure that products for VERTIV are properly identified and do not become mixed with products for other customers.

11.7 Final Inspection and Test plans

The Supplier is fully responsible for outgoing product quality and shall verify and document that this product conforms to all VERTIV requirements. The Supplier shall include a documented plan for final inspection and/or test. This final inspection and test plan shall be adequate to provide an accurate measure of the quality of the completed product. Control of outgoing product quality can be demonstrated by any of/or a combination of the following:

- A. Where statistical process control has been established and maintained:
 - In-process statistical control records indicating parts were manufactured with processes operating under statistical control and meeting VERTIV's requirements. Periodic audits are required to confirm that in-process controls are adequate.
- B. Where statistical process control has not been established:
 - Final inspection/test utilizing either 100% inspection/test or an appropriate, statistically valid, acceptance sampling plan based on a zero-defect acceptance number.

Acceptance of product by any sampling plan does not relieve the Supplier of the responsibility that parts shall meet all requirements. Documentation/records verifying the acceptance of outgoing product quality shall be available for review by VERTIV.

11.8 Drawing, Specification change and deviation

Supplier is authorized to deliver only materials conforming to the drawings and specifications.

When VERTIV Engineering team, authorizes a temporary specification (limited in quantity and/or in time), the Supplier shall observe and maintain the expiration date or condition and insure compliance with the original or superseding specifications when the authorization expires. All Engineering's authorizations shall be documented using the Engineering Deviation Request form (Each VERTIV Division can use specific form). Verbal agreements do not constitute Engineering's authorization and therefore, will not be honored. Delivery of Product "Under deviation" shall be marked, so that they can be clearly identified.

11.9 Non-Conforming Material Control

Material removed from in-process operations for repair, rework, or other reasons shall be segregated with status clearly identified and stored in a separate area designated for nonconforming material. The area shall be secured to prevent unauthorized removal of parts.

The Supplier shall establish procedures to correct product non-conformities that occur during production.

The Supplier shall inspect the product following repair to insure conformance to specification prior to shipment to VERTIV.

Repairs that deviate from or modify VERTIV specifications require VERTIV Engineering's approval as evidenced by an Engineering Deviation Request previously described in this manual.

The Supplier is required to notify VERTIV of any non-conforming material in transit or in existing VERTIV stock.

11.10 Corrective Action

The prime objective of corrective action is to eliminate the recurrence of non-conformances by identification and correction of the causes and contributing factors. This plan shall be prevention oriented and shall provide for follow-up to assure that the action was timely and effective.

The Supplier's program shall provide a plan for timely corrective action on all conditions detrimental to product quality including product deficiencies encountered during processing, fabrication, assembly, test and claims from VERTIV (using SCAR or 8D reports). To that end, the corrective action system shall be a documented structured

problem-solving approach (i.e. 8D approach). Minimum requirements of this system shall include/address the following elements:

- Problem definition (who, what, when, where, how, and how many)
- Problem investigation and evaluation to determine root cause (to be communicated to VERTIV not later than 5 working days OR as required by SQE in case of non-conformity found in VERTIV plants or in field impacting VERTIV's customers).
- Recording results of the investigation/evaluation.
- Evaluation, determination, and implementation of action(s) to eliminate the root cause and prevent recurrence (to be communicated to VERTIV not later than 10 working days OR as required by SQE in case of non-conformity found in VERTIV plants or in field impacting VERTIV's customers); and a mandatory action to check warehouses, production lines and shipping department. In summary, actions need to include the following:
 - Verifying implementation of the action(s) taken.
 - Application of controls to ensure effectiveness of action(s) taken.
 - Verifying the effectiveness of action(s) taken.
 - Recording results of action(s) taken.

Documented evidence of all the above should be required to supplement any SCAR (Supplier Corrective Action Request) initiated by VERTIV related to a product or service non-conforming condition. Upon request, first batch delivered after a SCAR shall always be accompanied by "Declaration of Quality and Conformity" referring to the features that were non-conforming.

11.11 Preventive Approach

Proactive actions to prevent the occurrence of non-conformities are the most desirable situation and is highly encouraged by Vertiv. Such preventive actions can be identified through Risk Analysis and Mitigation Plans, Failure Mode Effect Analysis (FMEA), Data trend analysis, brainstorming etc.

12. Supplier Performance Expectations

- A. All VERTIV Suppliers shall have active programs in place to meet and exceed the MINIMUM stated performance levels and should strive to reach the stated GOAL performance levels listed in Table 2, below. These goals may vary based on commodity type.
- B. If requested, the Supplier shall submit a corrective action plan for below goal performance and provide periodic updates to VERTIV until VERTIV performance expectations have been met.
- C. If the Supplier's corrective and preventative action plans fail to result in meaningful performance improvement after a reasonable period, VERTIV will take steps to disengage from the Supplier.

D. Monthly, VERTIV Supply Quality Dept., or Supply Chain Dept., will submit data on the performance of the Supplier. This data reflects the number of Non-Conformities found, the number of hours spent by the plants due to those non-conformities and the PPM (rejected parts on delivered parts). These data will be available by month for the current calendar year and can be compared with the same performance of the previous calendar year. When material is found to be defective, the Supplier will be notified by way of a Non-Conformity Sheet (NCS). The NCS will report the main information of the non-conformity. The Supplier is responsible to reply to the NCS with both short-term corrective action and long-term preventive actions within 20 working days.

E. Statistical Process Control

When applicable, VERTIV expects Supplier to establish and maintain statistical process control for Critical to quality parameters.

F. Delivery

Delivery has two key areas: On-time delivery or on time shipment to VERTIV and the shipping process. Both are important because a Quality made product arriving at an improper time, damaged or incorrectly identified, can create additional costs to VERTIV and to VERTIV's customers. The delays and costs do not promote a good quality image.

Suppliers are expected to provide the resources and systems to insure VERTIV with consistent on-time delivery or on time shipment. The VERTIV receiving plant will monitor the effectiveness of deliveries. It is strongly recommended that Supplier checks with the VERTIV plant Supplier Manager periodically, to review delivery performance or on time shipment record.

The shipping process involves several areas: packaging, labeling, handling, and shipping. The Supplier is expected to establish and maintain a material handling system that minimizes the potential for damage throughout all operations.

G. Table 2 : Supplier Quality Performance Metric Targets

Metric	Definition	VERTIV Performance Expectation Level
Defective PPM	$10^6 \times (\text{Quantity of units rejected}) / \text{Quantity of units of shipped}$ Units can be rejected by Vertiv (Or its subcontractors) during incoming inspection, while the units are in process or after shipments to an end customer. For simplicity, rejection for given rating period will not be aligned to the shipping period.	1000 PPM
Order Acknowledgement	The length of time required for the supplier to Acknowledge receipt of a Vertiv purchase order.	24 hrs
On time Delivery	Percentage of purchase order line items shipped on or a maximum of three days before the supplier Acknowledgement date.	95%
Response time for corrective action requests	The time in days for a supplier to respond to all Vertiv generated corrective action requests within a given rating period.	
	Containment action	48 hours
	Corrective Action	5 working days
	Full Implementation	20 working days
RMA Turnaround time	The time in hours for a supplier to provide Vertiv with a Return Material Authorization for a defective material	2 working days for regional suppliers 3 working days for overseas suppliers

13. Supplier Scorecards and Business Review Meetings

- 13.1 VERTIV may require the Supplier to submit monthly performance metric Scorecards in a VERTIV standardized format. If called upon to do so, the Supplier shall provide these reports to the designated Procurement or Quality contact on a timely basis each month. Corrective action plans may also be requested from the Supplier if one or more performance metrics remains below goal for a significant period.
- 13.2 VERTIV Supply Chain Management will schedule business reviews with suppliers at agreed intervals. The Supplier is expected to actively participate in these reviews designed to review Supplier performance; quality and commercial issues; and current and future business plans.

14. Supplier Non-Conformance Requirements

- 14.1 If the Supplier suspects they have shipped non-conforming product to VERTIV, VERTIV affiliates or end customers, the Supplier is obligated to inform VERTIV quality personnel immediately.
Purchased part non-conformities discovered by VERTIV will be reported to the Supplier as a claim.
- 14.2 Any purchased part rejected due to the fault of the Supplier will be managed in one or more of the following actions:
- 14.2.1 Return to Supplier at Supplier's cost for full credit or refund.
- 14.2.2 Return to Supplier for rework at Supplier's cost - all repairs shall be completed to the drawing requirements.
- 14.2.3 In special cases (i.e. nonconformance jeopardizes production delivery dates being met), Vertiv will 100% inspect or rework the material locally. Vertiv will typically notify the Supplier before this activity begins with an estimate of the cost and a timeframe for completion. The Supplier will be billed reasonable and agreed upon material and labor costs associated with the rework or sorting. Detail of these costs will be contained inside the specific Quality Agreement.
- 14.2.4 If material is to be returned to the Supplier, the Supplier Shall acknowledge receipt of the claim and provide a Return Material Authorization (RMA) within the timeframes specified in Table 2 (above).
- 14.2.5 Unless otherwise specified by VERTIV Purchasing, RMA material shall be replaced or repaired and returned to VERTIV as soon as possible, preferred performance level, within ten (10) working days.
- 14.3 VERTIV will issue a Supplier Corrective Action Request (SCAR) form that the Supplier will use to document containment actions, root cause analysis and corrective and preventive action plans.
- 14.4 The Supplier may use its own SCAR response template (8D) if the regional VERTIV Supplier quality organization agrees.
- 14.5 The Supplier shall acknowledge receipt of the SCAR within 24 hours and provide a response with the Supplier's initial corrective action plan within the intervals specified in Table 2 (above).

15. Warranty Claims

- 15.1 If VERTIV end customers are affected by a Supplier quality issue within the warranty period, the Supplier shall assist VERTIV with resolving customer issues which may include but is not limited to: providing replacement material on an expedited basis; developing field rework procedures; sending Supplier personnel to customer locations, etc.
- 15.1.1. Upon request Supplier shall provide a formal plan to resolve warranty claims within 48 hours.
- 15.1.2 Further detail regarding Warranty Claims Management will be contained on the specific Quality Agreement or Master Supplier Agreement.

16 Repair

- 16.1 Vertiv will need to approve the plan for Supplier to repair and return products prior to repair/shipment.
- 16.1.1 The Supplier shall warrant that all product returned to them for repair work will meet all VERTIV Requirements upon return.

- 16.3 The Supplier shall return the repaired product within ten working days after receipt of the product, unless otherwise agreed with Vertiv.

17 Document and Revision Control

- 17.1 The Supplier shall have a document control system in place that ensures that the Supplier has the latest revision documentation issued from VERTIV.
- 17.2 VERTIV documentation and requirements include, but are not limited to: purchased part drawings, engineering and quality specifications, packaging instructions, test instructions, Assembly and Manufacturing Instructions and tool drawings.
- 17.3 New and revised VERTIV documentation shall be fully reviewed by the Supplier and the Supplier shall verify compliance to VERTIV documentation prior to the manufacture and shipment of products. If the Supplier takes exception to updated VERTIV documentation, the Supplier Shall notify the VERTIV buyer for resolution between VERTIV and the Supplier.
- 17.4 The Supplier is responsible for ensuring that they have the latest revision of VERTIV documentation prior to fulfilling an order. Revision levels are typically listed on the VERTIV purchase order. If the Supplier has access to the VERTIV's product documentation database, the Supplier shall verify that they have the latest revision documentation in this database.
- 17.5 All information, drawings, materials, goods and equipment provided to Suppliers by VERTIV or arising from work or services done for VERTIV shall be treated by Suppliers as confidential and proprietary to VERTIV and shall not be disclosed or shown to others by Supplier without written permission from VERTIV.

18 Customer Property

- 18.1 The supplier shall take care with Vertiv supplied property and shall assume responsibility for any loss, damage or destruction while it is under the supplier's control or being used by the supplier.
- 18.2 Any materials issued free to a supplier for furtherance of Vertiv order shall only be utilized on Vertiv product. Suppliers shall maintain traceable records of all free issued items for potential future audit by Vertiv. The supplier shall maintain identity of all surplus material and tooling for return to the purchaser at the end of the contract unless otherwise directed by the purchaser.
- 18.3 Suppliers shall have a process in place to monitor the condition of Vertiv supplied tooling/equipment/test jigs on a regular basis to ensure that items remain in a serviceable condition. If tooling /equipment/test jigs are worn or damaged, then Vertiv shall be contacted to determine corrective actions to be taken. The

supplier is responsible for the routine calibration of this Vertiv supplied tooling/equipment/test jigs in line with the supplier's calibration system requirements.

19 Packaging Requirements

- 19.1 All purchased parts shipping to VERTIV or to VERTIV end customers shall be packaged securely in appropriately sized containers as to prevent any damage during normal handling and transportation. Open spaces in unit containers and shipping containers shall be filled to prevent movement during shipping and handling.
- 19.2 Only one VERTIV part number shall be packaged in a unit container.
- 19.3 Incoming material that is inappropriately packaged may be rejected back to the Supplier at the Supplier's cost.
- 19.4 Any special packaging requirements listed in the purchase order, VERTIV part drawing or packaging instructions will be in addition to the requirements of this document and will take precedence over this document where conflicts exist. Any deviation to the VERTIV general packing specification needs to be informed to VERTIV warehouse/logistics department and must be approved by a VERTIV representative.
- 19.5 Hazardous material packaging and labeling (example: batteries) shall meet all applicable regulations that apply to the material which may be country specific including Highway/IATA/IMDG transport guidelines and norms for disposal after use.
- 19.6 All electronic components that can be damaged by ESD shall be packaged in ESD shielded containers.
- 19.6.1 Packages that contain ESD sensitive materials shall be labeled to indicate they contain such parts.
- 19.6.2 Printed circuit board assemblies shall be individually packaged in ESD shielded containers.
- 19.7 Filler material shall not consist of the following:
- 19.7.1 Sawdust
- 19.7.2 Loose foam material (Styrofoam peanuts, shells etc.)
- 19.7.3 Shredded paper
- 19.8 Pallet requirements**
- 19.8.1 Europe and the Middle East: EURO pallets (800 by 1,200 by 144mm) made to the European Pallet Association (EPAL) requirements should be used by all Suppliers unless otherwise authorized in writing

by VERTIV Procurement. Any alternative pallets which varies from approved types for oversized items must be approved in advance by VERTIV.

- 19.8.2 Pallets used to ship internationally and to the following locations (McAllen, TX, Calexico, CA, Reynosa, MX and Mexicali, MX) shall be incapable of being a carrier of invasive species, insects or plant diseases and shall be heat treated and carry the HT initials near the IPPC (International Plant Protection Convention) logo. Alternatively, the pallets may be fumigated if permitted by the local regulations and carry IPPC logo.
- 19.8.3 Pallets shipping to McAllen, TX shall have a maximum length of 42 inches unless the unit container exceeds these dimensions. This requirement is based on the VERTIV customer standard.
- 19.8.4 Pallets should be produced by sustainable wood sources and stamped as such

20 Package Identification & Packing List Requirements

- 20.1 Unless otherwise documented in regional-specific documents, packing and shipping labels shall adhere to the following requirements:
 - 20.1.1 Hand written markings are not acceptable
 - 20.1.2 Unless otherwise specified, barcodes shall be 1D, 2D, code 39 or 128 and shall NOT contain data identifiers.
- 20.2 Parts designated with barcode requirements shall contain a Vertiv part number and serial number.
 - 20.2.1 Required fields for packing and shipping labels are defined below in Table 3.

Table 3: Packing and Shipping Label Field Requirements

Label Type	Usage	Unit packing label	Over pack label	3S shipping label	4S shipping label	5S shipping label	6S shipping label	7S shipping label
	Used on unit container packaging. Note: A unit container is used to package one or more purchased parts of the same Vertiv part number. The container may also be the shipping container.		Used on overpack packing. Note: An overpack container is a package used to contain one or more unit containers of the same Vertiv part number and may be the shipping container.	A shipping label placed on each cartons in a shipping as loose cartons or in a palletized load. Each carton labeled with a 3S label can only contain one Vertiv part number for a single Vertiv purchase order.	a shipping label for a palletized load or master container that contains only one Vertiv part number for a single Vertiv purchase order	a shipping label for a palletized load or master container that contains > 1 Vertiv part numbers for a single Vertiv purchase order	A shipping label for a palletized load or master container that contains 1 Vertiv part numbers for > 1 Vertiv purchase order	A shipping label for a palletized load or master container that contains > 1 Vertiv part numbers for > 1 Vertiv purchase order
Weight				MT	MT	MT	MT	MT
Package count (container X of Y)				MT	MT	OT	OT	OT
Vertiv purchase order number				MT	MT	MT	MT	MT
Vertiv purchase order number				MTB	MTB	MTB	Multi-order(T)	Multi-order(T)
Vertiv Ship to address				MT	MT	MT	MT	MT
Supplier name and address				OT	OT	MT	MT	MT
Country of origin				MT	MT	MT	MT	MT
Supplier date code				MT				
ESD labeling (if applicable)				M				
Serial number (if applicable)				MTB				
Unit of measure				MT	MT			
Quantity				MTB	MT			
Part Description				MT	OT			
Vertiv part number revision				MT	OT			
Vertiv part number				MTB	MT	Mixed load (T)	MT	Mixed load

20.3 Each shipment shall have a packing list placed in a packing list envelope. The packing lists shall have the minimum fields listed in Table 4 below:

Table 4: Packing List Field Requirement

Packing List Fields	Header/Body	Notes
Ship Date	Header	
Vertiv purchase order number	Header	MTB
Customer purchase order number	Header	Note: If a supplier is drop shipping an order to one of Vertiv' s customers, then Vertiv' s customer purchase order must be printed on the packing slip
Ship to address	Header	
Bill to address	Header	
Number of shipping weight	Header	
Freight terms	Header	
Vertiv part number	Body	
Vertiv part number revision	Body	
Part description	Body	
Vertiv purchase order quantity	Body	
Ship Quantity	Body	
Open Vertiv purchase order quantity	Body	Open ' quantity is the number of units yet to be shipped to fulfill the purchase order

21 Freight Compliance

- 21.1 Air and expedited freight shall be approved by VERTIV Purchasing or the VERTIV transportation Department.
- 21.2 Freight costs shall not be added to the material invoice. Material invoices containing freight costs will be short paid.

22 Part Identification Requirements

- 22.1 All purchased parts, where feasible, should be identified with the Supplier name, part number, revision level and date of manufacture. Supplier codes that contain equivalent information are acceptable
- 22.2 Part barcoding including information such as part number and serial number may be required.

23 Deviation Request

- 23.1 The Supplier is expected to ship product that fully meets all VERTIV requirements. Products that do not meet all VERTIV requirements shall NOT be shipped without an approved written Deviation. Under no circumstances will the Supplier ship product with only a verbal approval from VERTIV personnel.

24 Product Change Notifications

- 24.1 Suppliers shall notify VERTIV Supplier Quality of proposed changes in material fit, form, or function. The Supplier shall not implement such changes without prior written approval from VERTIV Supplier Quality.
- 24.2 Suppliers shall also notify VERTIV of planned product discontinuances, with minimum notice of 6 months.

25 Compliance and Disclosure Requirements

- 25.1 RoHS and REACH requirements:

25.1.1 For Suppliers that provide product to the Vertiv facilities or Vertiv customers in the European Union or in other regions as requested, purchased products shall be RoHS, REACH, CLP, WEEE, Battery Directive and Packaging Directive compliant.

25.1.2 Upon request, it is the responsibility of the Supplier to automatically send Material Declarations to the VERTIV Buyer upon receipt of a purchase order for a new part number. A new part number is defined as a part that has not been provided by the Supplier to VERTIV in the past.

25.1.2.1 Material declarations may be required by any VERTIV purchasing location, not just those located in the European Union.

25.1.2.2 The Supplier shall use the requested format for Full Material Declarations. Supplier responses shall be written in English. The Supplier shall submit declarations using the requested web portal or other method.

25.2 Conflict Minerals: The Supplier shall identify the country of origin and the locations where Conflict Minerals are processed. The Supplier shall use the requested format using the requested web portal or other method when responding to Conflict Mineral inquiries.

25.3 Suppliers must maintain a code of conduct or a policy that addresses general ethical issues and responsibility, and maintains a process for employees to report concerns.

25.3.1 Supplier should provide the code of conduct or policy to Vertiv for review. The supplier's legal or compliance department would likely be the correct contact.

-
- 25.4. Supplier must maintain a human rights policy that addresses child labor, forced labor, human trafficking, working hour and wage laws, and non-discrimination.
- 25.4.1 Supplier should provide the policy to Vertiv for review. The supplier's legal or compliance department would likely be the correct contact.
- 25.5 Supplier must prohibit corruption, including bribes, kickbacks, or other improper payments, with binding rules for all employees.
- 25.5.1 Supplier should provide the program documents to Vertiv for review. The supplier's legal or compliance department would likely be the correct contact.
- 25.6 SDS: The Supplier shall provide a Safety Data Sheet (SDS) to VERTIV upon request. Requirements for SDS's may vary by region and so the regional requirement of the purchasing location shall apply unless otherwise specified. The SDS shall be written in both English and the predominant language of the region where the purchased material is used. The VERTIV buyer will provide details on language requirements as required.
- 25.7 ISO: VERTIV prefers to conduct business with Suppliers that have an established environmental management system according to ISO 14001:2015 and ISO 45001:2018; ISO 9001:2015 for Quality; and an external validation of the QEHS.
- 25.8 Plastic part marking for recycling or disposal: Catalog parts composed of plastic or containing parts composed of plastic where:
- The marking is technically possible, economically reasonable and can be related to environmental benefits; and
 - The plastic part weighs >25 grams; require identification marking according to the standards established in ISO 11469, ISO 1043-1, 1043-2, 1043-3, and 1043-4.
- 25.8.1 Marking can be included in the part mold or imprinted on the part using a laser, ink or heat. If adhesive backed labels are used, they should be made of the same material as the part.
- 25.8.2 Printed circuit boards are exempt from this requirement.
- 25.9 Supplier should have an active effort to reduce GHG (Green House Gas) emission.

26 Agency Compliance Requirements

- 26.1 When manufacturing a product that is agency certified (example, UL, CSA, ETL, etc.) the Supplier shall follow all demands stated by the certifying authority.

- 26.2 Upon request the Supplier shall provide a certificate stating compliance with the applicable agencies.
- 26.3 If an audit results in a notice of deficiency from the certifying agency, a copy of the report shall be sent to VERTIV Supplier Quality within 24 hours.

27 Other Requirements

27.1 Access to Supplier's documents and Premises

All quality records collected before shipping the products to VERTIV, shall be recorded and archived by Supplier in electronic or paper form. The Supplier shall ensure access to all quality records related to all supplied products supply process phases. Free access to VERTIV personnel and/or VERTIV's customers shall also be ensured to Supplier's offices and production premises for any Audit or check of the Quality System whenever this is deemed to be necessary for the assessment of special critical processes affecting product quality. Whenever necessary, the Supplier shall also ensure access to VERTIV delegated personnel to sub-Suppliers premises, to carry out working method checks and/or tests.

- 27.1.1 **Material certifications:** Material certifications may be required with each shipment for some commodities. The requirement will be communicated to the Supplier on the VERTIV purchased order.
- 27.1.2 **VERTIV part numbers on delivery note:** On delivery note, (for each order row), it is mandatory to insert Vertiv part number. If this requirement will be not complied with, the Supplier will be billed for reasonable labor costs associated with the rework or sorting. Detail of these costs are contained inside the specific Quality Agreement.
- 27.1.3 **Availability of Technical Support:** Due to VERTIV global footprint, if technical support is required by VERTIV to support production and customer claims, the Supplier shall provide support during the purchasing facility's normal work hours. In the event of a crisis, the Supplier should provide support as required by VERTIV to resolve the issues

28 Unique Requirements for Contract Manufacturers

28.1 Approved Supplier List

VERTIV utilizes an approved Supplier list for all purchased parts. If specified, the Contract Manufacturer shall ONLY buy from VERTIV approved Suppliers. No exceptions are allowed without an authorized deviation and/or a revised Approved Supplier List that includes the new Supplier.

28.2 Processes with Special Requirements

VERTIV has identified key manufacturing processes and created additional process requirements that the Contract Manufacturers shall abide by. Please contact VERTIV regional SQA for these process requirements. Typical processes with process and workmanship standards are as follows:

- 28.2.1.1 Powder coat painting
- 28.2.1.2 Structural welding
- 28.2.1.3 Cable assembly and test
- 28.2.1.4 Printed circuit board assemblies
- 28.2.1.5 Metal parts assembly - sheet metal enclosure manufacturing process
- 28.2.1.6 Guideline for Visual inspection of Sheet metal
- 28.2.1.7 Aluminum busbars
- 28.2.1.8 Wound components

28.3 **Part Labeling Requirements**

All custom parts require some additional level of labeling or markings that can include: Supplier identification; VERTIV part number and drawing revision level; date code, etc. Refer to the VERTIV drawing or specification for specific details.

28.4 **Management of Second Tier Suppliers**

A Contract Manufacturer (Sub supplier) that purchases components from a Supplier listed on VERTIV's Approved Supplier List (ASL) has the following responsibilities:

- 28.4.1 The Contract Manufacturer shall have processes in place to help ensure that purchased components meet the requirements listed on VERTIV drawings and/or specifications. If desired, the Supplier can contact VERTIV Engineering or Supply Chain Engineering to address any specific commodity questions.
- 28.4.2 VERTIV may transfer custom parts to a new and approved Supplier. When this occurs, the Contract Manufacturer is required to help VERTIV manage the production part approval process.
The Contract Manufacturer shall request corrective actions from second tier Suppliers when purchased components do not meet requirements and to verify that the second tier Supplier has implemented effective containment, corrective and preventative actions.
- 28.4.3 The Contract Manufacturer shall inform VERTIV when they receive product or process change notices from second tier Suppliers.
- 28.4.4 Sub suppliers shall provide Safety Data Sheets (SDS) upon request by VERTIV
- 28.4.5 In some cases, VERTIV may allow the Supplier to use their own second tier Suppliers to build VERTIV custom assemblies; however, the Contract Manufacturer shall:

28.4.6 Provide VERTIV Quality Assurance with the name of the proposed Supplier and the part numbers that Contract Manufacturer plans to source from the new Supplier.

28.4.7 Provide VERTIV Quality Assurance with a description of the process used to qualify the proposed Supplier.

28.4.8 Evaluate and approve first article samples from the proposed Supplier and ensure that the parts meet all VERTIV part drawings and specification requirements

28.4.9 Obtain written approval to use the proposed Supplier from both VERTIV Quality Assurance and VERTIV Sourcing.

28.5 **Contract Manufacturer Involvement in the New Product Introduction Process**

VERTIV may partner with Contract Manufacturer's to introduce new products that are assembled complete and shipped directly to VERTIV customers. When this situation arises, the Contract Manufacturer will be required to provide the deliverables listed in column 'D' of Table 1, "Typical Production Part Approval Requirements" of this document.

28.6 **Storage and Handling of Materials**

28.6.1 The Contract Manufacturer shall have processes and procedures in place to prevent damage to purchased parts, work in process, and supply items. Unfinished metal products, wooden pallets and other items susceptible to environmental damage shall be stored in protected areas to prevent damage.

28.6.2 The Contract Manufacturer shall have FIFO (First In, First Out) and/or FEFO (First Expired, First Out) inventory control measures to help ensure shelf life requirements are met and old revisions are consumed prior to the use of new ones.

28.7 **Manufacturing Instructions**

28.7.1 Manufacturing Instructions are defined as any documentation that contains unique information, not present on the product design drawings that provide information necessary to assembly, test or inspect VERTIV products. Examples of Manufacturing Instructions include, but are not limited to assembly procedures, test instructions, inspection checklists, labeling instructions and packaging instructions. Manufacturing Instructions are typically used for complex products where the method of manufacture, test and/or inspection is unobvious from the design drawings.

28.7.2 VERTIV may provide Manufacturing Instructions to the Contract Manufacturer at the time of product transfer. It is the Contract Manufacturer's responsibility to keep the Manufacturing Instructions current as design changes occur or as process refinements are implemented.

The Contract Manufacturer may be asked to create Manufacturing Instructions for new products or existing products where no such manufacturing instructions exist. Here again, it is the Contract Manufacturer's responsibility to keep the Manufacturing Instructions current as design changes occur.

28.7.3 Manufacturing Instructions developed or updated by the Contract Manufacturer shall be provided to VERTIV upon request.

28.7.4 Any changes made to Manufacturing Instructions that may affect fit, form or function of VERTIV products shall be approved by VERTIV Engineering and Quality.

28.8 **Record Retention and Traceability**

If requested, Contract Manufacturers who assemble completed products and ship directly to Vertiv's end customers shall have the following processes in place:

28.8.1 The ability to label each product with a unique serial number and/or date code to allow for warranty determination after shipment. Records of shipped serial numbers shall be maintained for at least 10 years.

28.8.2 If products are electrically tested, records of test plan changes need to be maintained for at least 10 years.

28.9 **Notification of Changes Unique to Contract Manufacturers**

28.9.1 The Contract Manufacturer shall notify VERTIV of the following types of proposed changes. After internal, satisfactory, verification that involve Supply Chain Quality, VERTIV will provide written approval of these changes.

- Changes in manufacturing location
- Changes in the manufacturing or test processes
- Material changes
- Tooling changes

29 **Regional Requirements**

29.1 Region-specific requirements are listed below. The Supplier shall contact Sourcing or Supplier Quality Engineering to obtain the referenced documents since they may contain VERTIV specific requirements that may not be referenced in purchase orders or product documentation.

29.2 EMEA, NORTH AMERICA, INDIA, GREATER CHINA

29.2.1 For suppliers of custom products and subassemblies used exclusively by the DC Power Line of Business (LOB) in North America, the requirements document SCD-000002, "Supplier Engineering and Quality Specification List for Power Management, North America" shall be met.

- 29.2.2 Supplier invoices shall contain the following fields to ensure compliance with ITC, LTD (EUR1) requirements
- 1.1.1. Date of issue;
 - 1.1.2. A sequential number that uniquely identifies the invoice;
 - 1.1.3. Value Added Tax (V.A.T.) registration number;
 - 1.1.4. Country where Buyer is liable to pay tax;
 - 1.1.5. Full name and address of Supplier;
 - 1.1.6. Full name and address of Buyer;
 - 1.1.7. Full name and address of company receiving goods on behalf of Buyer;
 - 1.1.8. Quantity and nature of goods or services supplied;
 - 1.1.9. Date on which the supply was completed;
 - 1.1.10. Unit price, exclusive of tax;
 - 1.1.11. V.A.T. rate applied;
 - 1.1.12. V.A.T. amount payable;
 - 1.1.13. Tariff (Harmonized System) code;
 - 1.1.14. Preferential Status;
 - 1.1.15. Country of Origin;
 - 1.1.16. Payment terms;
 - 1.1.17. Delivery Terms;
 - 1.1.18. Purchase order number.



Appendix A

A Supplier Quality Manual Acknowledgement Form

VERTIV

Supplier Acknowledgement

Dear Supplier,

Vertiv has developed this Supplier Quality Manual to communicate, clarify and document our requirements to all current and future suppliers.

It is requested that Supplier representatives sign and date this acknowledgement and return it to the Vertiv Quality Department using the following:

email:

We, the undersigned, hereby acknowledge the receipt of the Vertiv Global Supplier Quality Manual, Revision ___0___, and understand and agree to the contents and conditions specified therein.

SUPPLIER INFORMATION

Name: _____

Address: _____

Signature:

Print Signature Title Date