Introduction

1.1. This document is an integral part of a purchase order,

1.2. Items detailed in this purchase order are intended for defense companies such as Rafael, Elbit, IAI.

1.3. This specification obliges to meet the quality requirements that relevant to the field of activity of sub-contractor/supplier.

1.4. The sub-contractor/supplier is requested to review the requirements and send back by return email the confirmation of the ability to implement the order.With this confirmation, the sub-contractor/supplier confirms that he

- Received the purchase order,
- Considered all the requirements related to implementation of this order,
- All requirements for performance are clear and acceptable,
- Due date/delivery date are acceptable.

2. Definitions:

2.1. Buyer: MFP Group

2.2. Supplier: Supplier, Sub-contractor or distributor who provide products, services and processes to the buyer.

3. Applicable documents

3.1. EN/AS 9100 D :2016

3.2. AS9102 First Article Inspection (Latest Revision)

3.3. AS9103 Variation Management (Latest Revision)

4. Supplier's classification

	Suppliers of
Group 1	Mechanical Parts manufactured by sub-contractors
Group 2	Subcontractors for making the placement of components, electronic / electro-mechanical assemblies
Group 3	Harnesses / cables manufactured by sub-contractors
Group 4	PCB manufactured by suppliers according to MFP's configuration.
Group 5	Special Processes suppliers: coatings, painting, etc.
Group 6	Raw material and components manufacturers and distributors
Group 7	Testing and laboratories services

5. General Requirements:

5.1. QMS Certifications:

5.1.1. Suppliers shall be certified to ISO-9001 or AS9100 standard (Latest Revision) or AS9120 for group 6 suppliers.

5.1.2. Group 5 suppliers shall be certified in addition the 5.1.1 requirements, by the Final customer or shall be audited by MFP quality department according to the applicable requirements of AS9100.

5.1.3. Calibration and tests services provider (Group 7) shall be certified to ISO17025 at latest revision.

5.2. Awareness:

5.2.1. The suppler shall ensure that the persons performing activities related to MFP P.O are aware of their contribution to product or service conformity, product safety and relevant ethical behavior.

5.3. Monitoring of suppliers Performance

5.3.1. The buyer maintains a system to evaluate the supplier's performance.

5.3.2. Suppliers with quality rating below 96% and OTD performance below 85% shall be identified as "On Risk" and will be requested to submit mitigation plan.

5.4. Approval of deviations and reporting of non-conformances:

5.4.1. The supplier shall report to MFP on every case that supplier identifies any material / item / product with deviation.

5.4.2. The supplier is not authorized for any use as is or repair decision for non-conforming products or materials.

5.4.3. Any deviation must be approved by MFP.

5.4.4. The supplier shall report to MFP within 24 hours about any deviation found by the supplier which may impact of products quality.

5.5. Return of non-conforming items / products

5.6.1 Items / products found as non-conforming by MFP will be returned to supplier with a delivery note and nonconformance description.

5.6.2 Upon completion of the repair of product, the supplier will return the items / products with a delivery note comment "No charge after repair".

5.6. Corrective actions report

5.6.1. The supplier shall initiate root cause analysis and corrective actions to eliminate the cause for any non-conformity related to the supplier's activities.

5.6.2. The root cause analysis shall include, as applicable analysis related to human factor.

5.6.3. The supplier shall immediately repot MFP about any non-conformities that might affect supplied materials/parts.

5.6.4. The Corrective action plan shall be sent for buyer approval within 14 workdays.

5.7. Right of access

5.7.1. Work under this purchase order/contract can be subject to buyer and / or customer and/or regulatory bodies / authorities' surveillance / inspection at the supplier's facilities and sub-tier supplier's facility. The buyer undertakes to arrange visits in advance with the supplier.

5.8. First item (FAI) and process changes (Group 1, 2, 3, 4 only)

5.8.1. First article inspection shall be performed for each first production lot.

5.8.2. The FAI will be carried out for each new product, change of product edition or after a 24-month break in production of the item.

5.8.3. Report to be filed on AS 9102 forms, the report must include actual results.

5.8.4. First Article shall be identified.

5.8.5. Any modification in the production process must be advised in advance to allow examination of the need for renewed approval of First Article (complete or partial).

5.9. Identification

5.9.1. Marking method shall be according to drawing requirements or as approved by MFP.

5.9.2. Mechanical parts shall be identified with a Date Code of shipment: WWYY (week number, year), Part Number and Revision letter

5.10. Packaging and Foreign Object Damage (FOD)

5.10.1. The supplier shall plan and implement the necessary measures to prevent damage to the product during the transport, production, and storage stages.

5.10.2. The parts will be packed in a way that will allow verification of part counts at the customer in a fast and reliable manner.

5.10.3. A sticker shall be affixed to each package indicating the product details, the name of the supplier and the exact quantity of parts in the package.

5.10.4. Each shipment will be accompanied by inspection reports, an invoice that includes the order number, part number and revision, at least.

5.10.5. Before packaging the products or carrying out a process, the products will be inspected for the detection and prevention of foreign entities FOD.

5.10.6. If a packaging specification is defined by the buyer or by the final customer, the parts will be packed in accordance with the buyer's or customer's specification.

5.11. Traceability

5.11.1. Traceability to raw material is required, mixing of 2 or more materials lost is not allowed.

5.12. Records

5.12.1. The manufacturer shall maintain quality records regarding products for a 10-year period at least or according to other instruction by the final customer.

5.12.2. Destroying quality records of aerospace / defense products requires prior approval of MFP by submitting waiver request.

5.13. Employee certification

5.13.1. Production and inspection operations performed by the supplier shall be performed by authorized personnel in accordance with the requirements of the applicable standards.

5.13.2. Quality inspectors and production employees, who, as part of their profession, care about the quality of vision (such as paints, coatings), must have proper vision that includes visual acuity, depth of vision and proper color diagnosis. Compliance with this requirement will be checked by a qualified person (optometrist / ophthalmologist) at least once every two years (unless otherwise required by an applicable standard).

5.14. Flow down requirement to sub-contractors

5.14.1. The ordered work will be carried out by the supplier. Temporary or permanent transfer of work related to MFP shall be subjected to the approval of MFP.

5.14.2. It is the supplier's responsibility to implement and flow down to the subcontractors the relevant quality requirements of the end customers:

Final customer	Applicable requirements

Rafael	Quality Appendix 93.00.63 (from Rafael's Supplier Portal: https://slp.storenext.co.il/my.policy
IAI	Quality requirements can be found on the IAI website at the link below: https://www.iai.co.il/heb/suppliers/quality-requirements
Elbit	Quality requirements for subcontractors and suppliers: OP301-D100-ESX-A

5.15. Product Safety

5.15.1. The supplier shall identify product safety requirements specified in the PO and implement the required controls. Product safety issued may be determined by the suppliers to mitigate risks or comply to regulations.

5.16. Counterfeit part prevention

5.16.1. The supplier will comply with the requirements of AS5553 and AS6174 standards.

5.16.2. The Supplier may only purchase or source Items directly from Original Component Manufacturers ("OCM"), OCM authorized (e.g. franchised) distributors or aftermarket manufacturers. Use, purchase or the sourcing of Items from non OCM authorized independent distributors or brokers are not permitted unless first approved in writing by the Purchaser.

5.16.3. The Supplier must present compelling support for its request to use such non OCM authorized suppliers for the Purchaser's approval (including but not limited to OCM documentation that authenticates supply chain traceability of the parts to the OCM) and include in its request all necessary actions it shall take to ensure those Items thus procured are new, unused, authentic, genuine, and legitimate Items.

5.16.4. The Supplier shall maintain a method of traceability that ensures tracking of the supply chain back to the manufacturer of all Items included in the Supplies being supplied. This traceability method shall clearly identify the name and location of all supply chain intermediaries from the manufacturer to the direct source of each Item for the Supplier and shall include the manufacturer's batch identification for the Item such as but not limited to date codes, lot codes, serializations, or other batch identifications. Full supply chain traceability documentation includes but is not limited to OCM, Original Equipment.

5.17. Documents required for delivery to MFP group companies: Certificate of Conformity (COC) and Serviceable Tag

5.17.1. Each shipment of items/products will be supplied with a Certificate of Conformance and Serviceable Tag, stating that the products, parts, items or materials, furnished under this purchase order, were produced and tested in conformance with the requirements of the purchase order, drawings and specifications.

The COC will include the following information:

- Number of the purchase order,
- Manufacturer name,
- Manufacturer Part Number (P.N),
- Customer Drawing or Specification number including the revision.
- Serial number for the numbered item
- Quantity in the batch,

The Serviceable Tag will be attached to **each numbered item/product** and will include the following information:

- Number of the purchase order,
- Manufacturer name,
- Manufacturer Part Number (P.N),
- Customer drawings' and specifications' numbers including the revision.
- Item's Serial Number.

6. Additional Requirements according to supplier's category:

6.1 Group 1 - Mechanical Parts manufactured by sub-contractors

6.1.1 Raw materials will be purchased from an approved distributor only defined by MFP for the final customer.

6.1.2 Raw materials for Rafael or IAI will be provided with an original certificate of validity (STS / COC SHIPPER).

6.1.3 The use of raw materials whose absorption date is greater than 5 years is prohibited.

6.1.4 Materials without original validation shall be approved prior to shipping by the customer and by MFP.

6.1.5 For materials defined as "critical" by the customer, the raw material (chemical composition and hardness) will be validated in an approved laboratory under the responsibility of the supplier.

6.1.6 Processes must be performed only by subcontractors approved by the buyer and by the customer according to a list of special process suppliers approved by the customer.

6.1.7 The supplier will ensure during the production, inspection, and packaging processes the existence of conditions and activities to prevent foreign entities FOD.

6.1.8 Unless otherwise defined, the sampling method for dimensional final inspection and thread inspection is according to Squeglia, RAR 2.5%

6.1.9 Visual inspection of the quality of work, insertion of fasteners and execution of threads will be performed on 100% of the supplied items.

6.1.10 **Key Characteristics (KC) will be managed in accordance with the requirements of the AS9103** standard.

6.2 Group 2 - Subcontractors for making the placement of components, electronic / electro-mechanical assemblies.

6.2.1 The work will be performed in accordance with the requirements of IPC-A-610 CLASS 3.

6.2.2 The supplier will not use the LF in production processes without the prior approval of the buyer.

6.2.3 Moisture sensitive components shall be treated in accordance with JSTD-033 and JSTD-020.

6.2.4 AOI test must be performed on 100% of PCBA (after placement).

6.2.5 In case of repeated failure or repair of over 10% of the PCBA batch, a 100% repeat AOI test should be performed.

6.2.6 If AOI test cannot be performed, an X-ray test must be performed.

6.2.7 The status of the tests will be identified on the card (AOI, X-Ray)

6.2.8 Washing of PCBA shall be performed using the materials defined in the production documents. Do not use alternative material without the prior approval of the buyer.

6.2.9 The PCBA will be packed in antistatic bags.

6.2.10 FAI documents will be provided at the end of all processes and will include all the information about the production of the PCBA - SMT data, soldering processes, gluing, coating / casting, special processes, problems, production files.

6.3 Group 3 - Harnesses / cables manufactured by sub-contractors

6.3.1 The work will be performance with accordance the requirements of IPC/WHAMA-A-620 Class 3. Crimping and cutting tools shall be validated according to the standard requirements, including the performance of pull test for each cutting and crimped lot.

6.3.2 For every new production batch, a prototype shall be manufactured and approved by MFP prior to manufacturing of the batch.

6.3.3 COC and TR for electrical tests shall be attached.

6.3.4 100% electric tests shall be performed.

6.3.5 Every harness shall be marked by a sticker including P/N and revision.

6.4 Group 4 – PCB's

6.4.1 The work will be performance with accordance the requirements of IPC-A-600 Class 3

6.4.2 Every batch shall be supplied with coupons and test reports.

6.4.3 Electronic boards shall be marked by identification stickers P/N D/C REV. S/N to identify the supplier.

6.4.4 Every PCB shall be packed in ESD bubble-wrap and a separate box to be supplied by MFP or as determined in the P/O.

6.5 Group 5 - Special Processes

6.5.1 Special processes shall be performed only by subcontractors approved by the customer and by MFP.

6.5.2 If required by the final customer or the buyer, the parts shall be supplied with accompanying test samples.

6.5.3 If required and according to MFP, drawing, specification or final customer requirement, Hydrogen embrittlement release or thermal treatment shall be performed - a report and treatment chart shall be supplied with the parts.

6.5.4 The supplier COT shall include the drawing and the applicable specifications / standards requirements, their edition, test results and the type of measuring tool used to perform the inspection.

6.5.5 The supplier is responsible to validate special processes according to the applicable specification. Validation report shall be submitted to MFP upon request.

6.6 Group 6 - Raw material and components manufacturers and distributors

6.6.1 **Fasteners**

Fasteners shall be supplied with a certificate of conformance to order requirements. The report shall include manufacturer details and lot number.

The fasteners shall be supplied from one manufacturing lot and one supplier.

For fasteners supplied according to NAS / MS requirements, the supplier must attach an original test certificate (COT) from the manufacturer to each supply.

6.6.2 **Components, PCB's or ESD sensitive products**

The components, PCB's or other ESD sensitive products shall be handled with appropriate protective measures to assure that the products are identified and packed with an appropriate protective packaging.

6.6.3 **Glues/Paints**

Every single package shall be marked with manufacturing date, recommended shelf life and storage conditions, temperature, humidity or other of all the items/materials with limited shelf life supplied in the PO.

The remaining shelf life shall be at least 80% of the general shelf life of the item during departure from supplier facility.

6.6.4 **Electronic components**

Electronic and electro-mechanical components shall be supplied in rulers or original manufacturer and complete antistatic packages.

Components with long legs such as transistors and capacitors shall be supplied in packaging which protects the component legs.

If the items were rolled or re-packed – the package shall be marked accordingly.

It shall be ensured by the supplier that components in the rulers are attached firmly and are not causing damage to other components.

Every shipment shall be accompanied by a COC of the original manufacturer or approved distributor. Components supplied by approved independent distributor shall be accompanied by COC traceable to MFP P.O and to the manufacturer/Authorized distributor COC.

Unless otherwise agreed with the customer, the components will be supplied with the DC less than 18 months from the week of production.

6.7 <u>Group 7 - Testing and calibration laboratories</u>

6.7.1 A calibration laboratory shall be approved to the ISO17025 standard by an authorized entity.

6.7.2 The laboratory will provide test reports / calibration certificates. The report will indicate the method of testing / calibration of the tool, the test findings, reference to exceptional findings (if any), signature and name of operation and confirmation of the calibration.

QA Manager JGur Jonathan Gurten, 18.10.2022