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## QSV\_Krüger Aviation

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Between Krüger Aviation GmbH

(hereinafter "Customer")

and

*Supplier*

(hereinafter "Supplier")



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### 1 General provisions

#### 1.1 Purpose and scope

This Quality Assurance Agreement (hereinafter “QAA”) is the binding stipulation between Customer and Supplier of the general technical and organizational conditions that apply to all deliveries to Customer.

The choice of a Supplier is fundamentally conditional on the Supplier’s ability to meet quality requirements. Supplier is solely responsible for the quality of the products that are delivered/serviced.

The QAA is an essential element of Customer’s scope of procurement and supplements the specifications contained in Customer’s order and the standards, codes, technical documentation and customer-specific requirements underlying the subject matter of that order. Customer’s statutory and contractual rights are limited neither thereby nor by notice taken of any documentation or other written notifications from Supplier pursuant to this Agreement.

This QAA applies to all products to be delivered and processes to be performed.

Customer’s competitiveness and position in the global market are defined by the quality of its products. The quality and dependability of the products and services purchased by Customer have a direct effect on the quality of Customer’s products.

The primary objectives are the safety of aviation and space flight and the satisfaction of our customers.

Only as a result of our work with our Suppliers it is possible to meet our customers’ requirements, complying with legal or official guidelines, and guarantee that the quality standards that apply throughout our company are satisfied. Each Supplier, however, fundamentally assumes sole responsibility for the quality of its products. This means also that, in cooperation with Customer, Supplier continues to enhance its standard of quality through ongoing refinement of its products and processes.

Entry into this QAA constitutes an indispensable step for the mutual and future business relations between Customer and Supplier.

### 2 Terminology

Unless explicitly defined otherwise, the terminology according to the EN/ISO 9000 family of standards generally applies.

#### 2.1 Work plan

Each step in the machining of a component is subject to a work plan. This work plan contains precise specifications for the machining steps that directly or indirectly affect the quality of the product.

#### 2.2 Test plan

The test plan shows how product quality is controlled through the entire process, from receipt of the goods to final inspection, in conformance with our purchase order and the agreed specifications.

#### 2.3 Component class



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Products intended for aviation are divided into three classes of components. These classes describe the criticality of the product in the event of failure.

Class 1. Human life may be endangered in the event of failure, for example as the result of an airplane crash.

Class 2. Severe impairment of the aircraft. A safe landing is still possible at any time, however.

Class 3. No hazardous or severe impairments of the aircraft in the event of failure.

Comparable classifications apply to space flight.

### 2.4 Production aids

ISO 9000 covers such production aids as, for example, test and measuring equipment, machining tools, type-specific tools, jigs and transport aids.

### 2.5 Products

All raw parts, semi-finished or finished parts, structural elements, component assemblies, auxiliary and working materials, services, software and components that are delivered pursuant to this QAA.

### 2.6 Feasibility analysis

The feasibility analysis serves to determine whether our order is feasible in terms of the requested quality and cost targets and in compliance with the requested delivery deadlines (including the first sample deadline).

### 2.7 Production monitoring

Monitoring a process ensures that the defined standard for official approval is met. For that purpose, production and testing procedures are frozen; i.e., they may be altered only with Customer's consent. "Production procedures" is understood here to comprise all procedures for repairing and maintaining the production facilities.

### 2.8 Extended workbench

A Supplier that performs single or multiple production operations according to work plans or, as the case may be, testing plans that are provided by Customer is deemed to be an "extended workbench". The material is provided by Customer.

### 2.9 Initial samples (first articles)

An initial sample is a representative unit from the first production run of a new part or new assembly that is manufactured according to approved drawings entirely with standard equipment and under standard conditions. It serves as proof that the production processes, production documentation and tools are suitable for making parts and assemblies that conform to the requirements. This process must be repeated as soon as changes occur (see Section 4.7) that supersede the original results (e.g. technical changes, changes in the manufacturing process, tool changes). An initial sample may be referred to also as a first article.



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### 3 Quality Management System

#### 3.1 Objective

Continual refinement of its performance must be Supplier's strategy for quality. The objectives are "zero defects" with 100% reliability of delivery and continual cost optimization.

#### 3.2 Requirements for the quality management system

For the duration of Supplier's business relations with Customer, Supplier must be able to provide proof of a valid certification. The certification process must also be carried out by an accredited certification company.

Certification to EN/ISO 9100 is a fundamental requirement for categorization as a qualified Supplier.

Design organizations and production plants must be certified to EN 9100.

Producers and dealers of hazardous materials must in addition provide proof of certification to EN 14001 or the equivalent.

The management must commit itself to continual quality and product refinement. The quality management system must be designed to detect risks, prevent defects through analysis, and identify and eliminate causes of failure. Customer will perform a Supplier evaluation. If measures for improvement are called for as a result thereof, they must be implemented.

Special agreements may be made with Customer in exceptional cases.

#### 3.3 Certification updates

Supplier must present its certificates to the Customer at its own responsibility and independently report updates immediately upon expiration of a certificate's period of validity or if a certificate lapses. An invalid or expired certificate will result in exclusion from the list of qualified Suppliers.

#### 3.4 Audit and Access

Supplier's quality management system is evaluated by agents of Customer.

Customer has the right to audit Supplier at any time with advance notice for compliance with customer requirements. In addition, Customer reserves the right to perform at its discretion acceptance inspections and monitoring, or have them performed, on Supplier's premises (audits). Supplier is not thereby released from its responsibility for quality. An immediate inspection is permitted in the event of substantial deficiencies of quality. If measures are required from the point of view of the Customer, the Supplier undertakes to draw up an action plan without delay, to implement it in due time and to inform the Customer about this.

Supplier must grant employees and customers of Customer and the appropriate authorities access to the areas of concern in all facilities, at any level of the supply chain, that are involved in the order and to all relevant records



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### 4 Procedures

#### 4.1 General provisions

Supplier bears full responsibility, in accordance with the documentation that is stipulated in writing, for faultless workmanship of the products and faultless performance of the services it delivers to Customer.

The feasibility analysis must be performed verifiably in the course of preparing its offer. All open points must be clarified before the offer is submitted. This process must be repeated in the event of changes to the product.

Supplier acknowledges that compliance with the terms of this provision is covered by the scope of its warranty. In the event of a warranty claim, Supplier bears the burden of proof that it acted according to the terms.

The advisory activity of Customer's employees does not release the contractor from compliance with all duties arising from the contracts between Supplier and Customer. Any provision Customer may make of equipment, planning documents or other means of support do not in any way limit Supplier's responsibility for the quality of its deliveries.

#### 4.2 Supplier's planning and compliance with deadlines

Supplier accepts the following fixed guideline for delivery deadlines:

On Time delivery = 0 days delay

Delivery before deadline by arrangement

In order to coordinate the production and to ensure the ability to deliver and the quality of delivery to be consistent, the Supplier must prepare in writing (documents are not to be supplied) for all products to be delivered:

- production plan (machines, jigs, tools, work sequences)
- test plan (test sequence, characteristics, means, and frequency)
- procurement plan (material, machines, production equipment, testing means, Suppliers)

Responsibilities and deadlines must be specified therein.

The resources for the work processes have to be determined and the availability has to be ensured. Furthermore, the responsibilities and powers are assigned. The Supplier ensures that qualified employees are used for the respective processes. Special qualifications for special manufacturing and test procedures must be ensured. It is important to ensure that all employees are aware of their contribution to product and service compliance, product safety and the importance of ethical behavior.

Supplier is further obligated to comply with agreed deadlines. This applies both to the delivery of products and first articles and to the delivery of FAI reports, 8D reports, and initiation of emergency, corrective and preventive measures. In the case of delays, Supplier must bear the added costs resulting therefrom. Adherence to deadlines is a component of the Supplier evaluation.

#### 4.3 Technical documents / documentation



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With its order confirmation, Supplier confirms that:

- all technical documents specified in the purchase order are available,
- these technical documents are available to all parties concerned,
- all other necessary documents, e.g. requirements for packing, transport, technical delivery terms, etc., are available,
- all documents have been understood,
- changes to drawings, works standards, etc., must be made known and trained in,
- all items in the purchase order can be manufactured according to Customer's specifications

Production and test documents, if they concern a specific delivery, must be uniquely assignable to that delivery. They must contain such particulars as Customer's order number, item within the order, material number, description of the material, and, if applicable, further additions such as, for example, heat treatment conditions or similar details

All copies of the test documents must bear the signatures of the persons authorized to sign them. The original documents will be retained by Supplier. Component-specific quality records must be delivered to Customer if Customer so requests.

Customer requests that are noted in the purchase order must be satisfied in addition to this Quality Assurance Agreement.

### 4.4 Procurement

Raw materials for production parts and processes, when specified by Customer, may be procured only from Suppliers that have been authorized by Customer. Procurement from alternative Suppliers is subject to Customer's prior approval.

If no sub-Suppliers are specified by Customer, Supplier may select only sub-Suppliers that have been certified at the least to EN/ISO 9001. Special agreements may be made with Customer in exceptional cases.

Supplier may farm orders from Customer out to sub-Suppliers only with Customer's consent.

Supplier must ensure that it and its sub-contractors are in possession of the documents necessary to process the order. These documents must be present with the same change status as that in effect for the purchase order.

Should sub-contracts have been awarded, it must be ensured that Supplier is able to meet all of its obligations arising from its contractual obligation to Customer.

Customer reserves the right to audit such sub-contractors as well. Supplier is obligated to enable such audits of a sub-Supplier, if necessary by contractual agreement with that sub-Supplier. Supplier is not, however, released thereby from its responsibility to Customer for the sub-Supplier

### 4.5 First articles

First articles are defined by Customer in the purchase order or, if there are changes, must be cleared with Customer. First articles are products that are manufactured and tested according to approved drawings under serial production conditions (supplied material, machines, plants, production equipment, testing means, machining conditions). Material supplied to Supplier by sub-Suppliers must have been approved by Supplier in turn, for example using FAI. Supporting documents must be producible at any time at Customer's request. First articles must, per EN 9102, be fully inspected and documented in respect of all characteristics (e.g. dimensions, materials) according to the drawing and the associated specifications and standards. The production and test records likewise must be



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a component of the initial sampling process. The procedural plan contains all steps in the production process. Details of the production steps must be available on demand for inspection. Each product must be subjected to a first-article-inspection. Standard parts, catalog parts, auxiliary and production materials and additives constitute an exception to this requirement. Should a change in the production process be necessitated by Supplier (cf. sec. 4.7), then a repetition of the first-article test must be carried out at no cost to Customer. The first article, together with the first-article-inspection report, must be delivered to Customer by the agreed date. The first article must be clearly labeled as such. The template for the first-article test report is available for download on Customer's homepage.

### 4.6 Inspection

Test criteria, inspection scope and test methods that are requested in the technical documents are binding. Any change is subject to Customer's written approval. Test frequencies must be specified in such a way that Supplier is able to meet its quality terms (unless Customer has provided them)

If a test result indicates defective products, those products must be rejected. All stocks that are still available (including inventories of Customer and of its customers) must be subjected to a screening inspection. The batches that follow must be subjected to testing in regard to elimination of the defect to make certain that the cause of failure has been removed. Customer must be promptly informed.

#### For goods receipt:

Procured components must undergo an incoming inspection. The materials / components must be traceable by means of certificates and the certificates must be archived. Based on a risk assessment of the components, there must be a process for validating the material products and specified properties for critical components. Supplier shall ensure that allegedly forged or counterfeited parts, such as unauthorized copies, imitations, replacements or modified parts, knowingly misrepresented as original parts, are identified and withdrawn from service. In the case of material / component supplies by the Customer, a visual inspection for damages and abnormalities and a check to identify the accessories shall be carried out.

#### For production:

Depending on the production procedure (e.g. heat treatment, casting, forging), the product testing must be supplemented with monitoring of the process parameters (e.g. temperature, pressures, times). Product and service provision must be carried out under controlled conditions, and process stability must be checked and documented using fixed process parameters and tolerances.

For non-destructive testings, an accreditation according to EN 4179 must be available. If this is not the case, a mutually acceptable solution must be achieved with Customer's purchasing department and Quality Manager.

#### For outgoing goods:

Inspection features, test scopes and test methods required in the technical documentation are binding. A change requires the written approval of the Customer. Testing frequencies shall be determined using statistical methods so that the Supplier can meet his quality requirements (unless specified by the Customer). Interface and / or welding surfaces marked in drawings are to be checked separately before delivery. If a test result indicates defective products of this batch, these must be sorted out. All available stocks (including stocks at the Customer and its customers) must be checked for this feature, should this not already be done in advance. The subsequent lots must be subjected to a fault clearance check to ensure that the cause of the fault has been eliminated.



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The Customer is to be informed immediately. For aerospace material, there must be an EN 4179 approval for non-destructive testing. If this is not the case, an amicable solution must be reached with the purchasing department and the level 3 person in charge of the Customer.

### 4.7 Changes

Customer's written approval is required beforehand if Supplier makes changes to, for example, structure, material, Suppliers, components, design, production or test procedures, tools, production parameters, additive materials, coolants, lubricants, jigs, packaging, preservation, or the like. Supplier agrees to give prompt notice of such changes as early as possible

A change is already available whenever the production or testing process followed for the first article is deviated from in any way, in which case the initial sampling process must be carried out anew. Its scope must be agreed with Customer. Required for approval of the change is, at the least, a documented test or an analytical evaluation.

Relocation of production plants, machines or production equipment must be reported to Customer's purchasing department in writing before the change is made and must be approved by Customer in writing.

Supplier must maintain documentation of the dates on which changes are initiated.

Supplier's obligation to comply with delivery dates for the approved products remains in effect despite notification of changes.

### 4.8 Test equipment and test devices

It must be ensured, by means of systematic, planned calibration and monitoring/management procedures, that only testing plans that are sufficiently precise, reliable and usable according to their technical specifications are used for testing. These are conditions for accurate assessment of test results for a product characteristic or process parameter.

Proof must be provided of a system for regular inspection that ensures that defective and expired test equipment or test devices are detected. This applies also to production facilities that are used as testing facility. Supplier is obligated to maintain documentation thereof and to provide it on request. The test equipment of Supplier that are used must be suitable for and capable of the intended tests. In addition, documentation of performed calibrations must be maintained.

For external acceptance inspections, Supplier will make the testing facilities on its own premises available to Customer's agents as needed, if necessary with testing personnel.

### 4.9 Defective products

#### 4.9.1 General provisions

Supplier guarantees that only products are shipped that conform to the technical requirements in the documents and demonstrably are not unapproved or counterfeit parts.

Supplier must report defective products by means of a Supplier's voluntary disclosure and withhold them until a written decision is received from Customer. Defective products must, at Customer's option, be removed from the process, sorted, repaired or scrapped.



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Products with approved deviations must be separately labeled. Packaging units must contain the appropriate information. Customer reserves the right to specify the documents necessary for handling the defective product. Once Customer has approved the deviation, Supplier must refer to the deviation approval in the test certificate and include a copy of the deviation approval with the delivery. Approval of a deviation or acceptance of defective products does not constitute a waiver on the part of Customer of existing rights or legal remedies.

### 4.9.2 Information to Customer

If Supplier discovers deviations that could also affect deliveries that have already been shipped, it must inform Customer's purchasing department immediately. This also includes knowledge about the approval or counterfeiting of the products. A duty of notification applies even when the products in question have already been delivered and accepted.

If Supplier is unable to eliminate the deviations by the next delivery, it must immediately notify Customer's purchasing department and discontinue all further delivery until instructions to the contrary have been received.

Supplier must document corrective and preventive actions. The documentation of such actions must be kept ready for inspection. At least an 8D report or a 5 whys analysis must be included with the delivery on request.

### 4.9.3 Inspection reports

In the inspection report, decisions concerning the use of products that have been complained about are documented by Customer and reported to Supplier. Supplier must implement the requirements described in the inspection report and give Customer's purchasing department written notification of rectification or corrective measures. Supplier must create, as part of the process of preparing inspection reports, an 8D report and send it to Customer within ten days. Customer reserves the right to specify the documents for this purpose.

### 4.9.4 Costs of defective products

Customer reserves the right to pass on to Supplier the costs incurred as a result of defective products. This applies also when costs have arisen as a result of hidden defects and are ascertained only after acceptance at a later time.

### 4.10 Reworking

Supplier must ensure, if necessary following consultation with Customer, that rectification or corrective measures performed on its products do not have any detrimental effects (e.g. in regard to dimensions, function, strength, durability).

Reworking that alters the characteristics of the product or results in deviations from the technical documents or frozen production conditions is—along with the planned reworking procedure—subject to approval. This applies also to sub-Suppliers. Such approval must be obtained in writing before the reworking takes place. This does not release Supplier from its responsibility for the quality of the product.

### 4.11 Complaints

If defects are complained of by Customer, its customers or public authorities, then Supplier must cure them immediately. If this does not happen despite a reminder, Customer is entitled to rescind



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the order and to demand damages for non-performance.

The tests performed at Supplier's site by employees of Customer or externally engaged persons do not constitute an acceptance inspection in the legal sense. Customer may assert warranty claims and other claims for non-conforming delivery even after a test is conducted by such persons.

### 4.12 Transport

Packing and/or protective equipment, if made available by Customer, must be used for internal transport and, as the case may be, for processing and return delivery. Any packing rules that may be specified must be complied with at the same time.

If Customer does not specify any special packing requirements, Supplier must at its own responsibility protect the products to be delivered, by means of packing materials that are suitable for the purpose, from damage, corrosion, penetration of foreign matter into the product, undo vibrations, moisture, electrostatic discharges (ESD), confusing/mixing of batches, or other hazards. The expiration date, if there is one, must be documented on the packaging in a readily visible manner.

Supplier warrants that the required accompanying technical and administrative documents are included in the scope of delivery. The delivery is deemed to have arrived in full only when all aforementioned accompanying papers are in Customer's possession along with the product.

The products and/or transport containers must be labeled in a way that they are uniquely identifiable and confusion or mix-ups are avoided. Separations between batches must be strictly observed. On all production lots and partial lots the stage of manufacture and inspection decision must be discernible. As a rule this applies at all times, i.e. at Supplier's end (e.g. in production, in testing, in storage) and in transit to Customer Retention periods for documents and test results.

### 4.13 Retention periods for documents and test results

#### 4.13.1 Non-aviation parts

Unless otherwise agreed, the retention period for records is ten years.

#### 4.13.2 Aircraft components

For parts or components for aviation equipment the retention periods are at least 25 years with a subsequent requirement of release to Customer for destruction of the documents.

The records are to be made available on request of the Customer and may only be destroyed after consultation and release by Customer.

### 4.14 Written correspondence

Unless otherwise agreed, written correspondence is, as a rule, to be maintained through Customer's purchasing department.

### 4.15 Duties of information

The Supplier must inform the Customer immediately if materials needed for the production of products ordered by the customer are no longer available or if it is foreseeable that they will no longer be available.

The Supplier must inform the Customer immediately if materials and chemicals, that have been ordered during the last 2 years.



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The Supplier has to lead a process for the identification of possible obsolescence. If risks for a future discontinuation of products or lack of availability have been known or identified, these must be communicated to the Customer immediately. Personnel and organizational changes of the management must be communicated to the Customer immediately in writing.

### 4.16 REACH Regulation

The Supplier is obliged to inspect its components and materials for substances affected by REACH and to send the Customer a notification of ingredients in accordance with the current REACH regulation (see EC Regulation 1907-2006). For deliveries of hazardous substances, the Supplier is obligated to deliver a safety data sheet for first deliveries. If the Supplier makes changes to the safety data sheet, it must be re-delivered or sent to the Customer's purchasing department by e-mail in advance.

### 4.17 Obsolescence management

Obsolescence management serves to avoid/reduce production losses resulting from outdated or no longer available raw materials, materials or production equipment. Supplier must immediately inform Customer if materials needed for production of products ordered by Customer are no longer available or if it is foreseeable that they will no longer be available.

Supplier must promptly inform Customer if materials or chemicals that have been ordered within the last two years are to be discontinued.

Technical or economic obsolescence does not release Supplier from its obligation to deliver contractual products according to contract. Substitute products may be delivered only with written approval.

### 4.18 Severability clause

Should individual provisions of this Agreement be invalid, the validity of the other provisions will not be affected thereby. The Parties agree to make, in lieu of the invalid provision, a valid provision that comes as close as possible to that provision.

## 5 Miscellaneous provisions

### 5.1 Normative references

|             |  |
|-------------|--|
| EN 9100     | Quality management systems – Requirements for Aviation, Space and Defense Organizations            |
| EN 9102     | Aviation and space flight – Quality management systems – Requirements for first article inspection |
| EN 9120     | Quality management systems – Requirements for aviation, space and defense distributors             |
| EN 9130     | Aviation and space flight – Quality management systems – Record retention                          |
| EN/ISO 9001 | Quality management systems - Requirements  |