

PRODUCT APPLICATION FORM

This Product Application Form is provided to you, the CUSTOMER, to help identify design features and product attributes that GRAKEN will need to know in order to begin a dialog to develop the product(s). Our goal is to provide our CUSTOMER with the exact product(s). Good product specifications enable GRAKEN to produce the sought product at the lowest possible cost and in the shortest time.

GENERAL in scope, this Product Application Form is intended for early sizing purposes. Please provide the product information requested (or as much as is known) on this form to your GRAKEN representative.

BRIEF PRODUCT DESCRIPTION (A summary of what is needed)

For Example: A product that can provide rotational torque to rapidly move a large control surface while enduring extreme environments. Further, the position of this surface must be known at all times.

PROJECT SCHEDULE and DELIVERABLE HARDWARE LIST

1. A schedule with milestone (key) events, such as System Requirements Review (SRR), Preliminary Design Review (PDR), Critical Design Review (CDR), First Article Build Complete (FABC), Qualification Testing Complete (QTC), First Article Ship Date (FASD)
2. A funding distribution schedule with payments tied to each key schedule milestone and allocated dollar amounts.

GOVERNING DOCUMENTS and APPLICABLE SPECIFICATIONS

1. All governing documents and/or applicable specifications that compliance is required (i.e., commercial, military, in-house, industry standards, etc.). List only sections, or subsections that apply, within a document, then identify accordingly. Eliminate references in cited documents that cite other documents to define the needed requirements. Cite appropriate document revisions.

PRODUCT INTERFACES

1. A drawing (or sketch) of the physical interface depicting the means to mount, attach and/or connect the sought product to existing structure.
2. Define the media passing across the interface boundary (i.e., hydraulic fluid, electrical power and/or mechanical linkage to included pressure, voltage, current, forces, etc.).
3. Define consumable resources such as fuel, lubrication, available horsepower, electrical power.
4. Define communication and control signals input and output requirements (i.e., signal type, data sample rate and type, bandwidth and frequency)
5. Define the human interactions for operation and maintenance, if needed.

PRODUCT CHARACTERISTICS

1. Physical size (envelope)
2. Maximum (and/or minimum) weight allotted
3. Operational and/or control logic, for instance, "if this, then that will occur, otherwise do"
4. Type of motion (i.e., linear, rotational, connected links, a combination of, etc.)

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5. Rates and speed of operation (and dwell periods) for input and output
6. Loads and/or forces from external sources impinging on product (i.e., type, magnitude, duration applied, orientation)
7. Internally generated forces (in response to external applied loads and/or forces) required at the output (i.e., type, magnitude, duration applied, orientation)
8. The product's transmissibility, in other words, how stiff or rigid should the structure and/or product be, or what is the control response bandwidth and frequency (for desired performance)

PRODUCT ENVIRONMENTAL CONDITIONS

1. Environmental conditions that the product must endure (i) operationally, (ii) during periods of non-operation (iii) and during shelf-life, (if needed), to include:
 - a. Temperature range (i.e., extremes that the product must survive),
 - b. Temperature shock (i.e., how quickly the temperature can change)
 - c. Freezing Rain and Ice
 - d. Humidity
 - e. Pressure (high and low)
 - f. Salt fog
 - g. Sand and Dust
 - h. Vibration
 - i. Acceleration forces (sudden shock such as drop-test, transportation loads)
 - j. Will the product(s) operate within or be exposed to explosive/decompression atmosphere
 - k. Will the product be exposed to EMI/EMP and/or radiation

VALIDATION and VERIFICATION

1. Define the testing requirements MIL-STD-810, MIL-STD-202, RTCA/DO-160, In-house derived, etc. for the product and the pass/fail criteria. Should it be possible, GRAKEN may recommend some tests be replaced by "Similarity Analyses" to save costs and time if the product is similar to other qualified GRAKEN products.

PRINCIPAL CONTACTS

1. List persons and their responsibilities for further inquiry, to include (Technical Liaison, Contract Administrator, Secretary):
 - a. Name
 - b. Telephone Number(s)
 - c. Email Address(es)
 - d. FAX Number(s)
 - e. Mailing Address(es)
 - f. Point of Delivery Address(es), if different.

OTHER USEFUL INFORMATION

1. Preferred CAD file format
2. In-house data and report submittal formats