



# BF10

## PROP/ROTOR DESIGN SPECIFICATION FORM

**ROTATING COMPOSITE TECHNOLOGIES, LLC**  
49 CAMBRIDGE HEIGHTS  
KENSINGTON, CT 06037

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## DESIGN REQUEST

Rotating Composite Technologies, LLC (RCT) requests completion of this prop/rotor design specification. This provides design information to RCT's engineering team to ensure that a thorough preliminary design analysis can be performed.

RCT places a particular emphasis on understanding your vehicle performance goals and program priorities. Good understanding of your program's prioritization of cost, noise, weight, performance, appearance, etc. is critical, so that RCT can engineer a technical solution closely aligned with your program priorities.

All the information you provide will be held in strict confidence. RCT understands that development programs are a work in progress. If your program has grey areas, please provide as much specific information as you can at this time. If the requested information is unknown or "TBD", indicate the ambiguity, rather than leaving blanks. This allows RCT to provide you with our best technical solution.

Completing and returning this form does not commit you to any program expenditure, conversely, it does not commit RCT to participate in any program.

If you have questions, please contact the provider of this form.

### 1. COMPANY/PROGRAM DATA

Company Name: \_\_\_\_\_

Preparer's Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Vehicle Model: \_\_\_\_\_

Earliest Need Date: \_\_\_\_\_

#### Program Priorities *(rate sequentially from 1 to 6, 1 is highest priority)*

|       |             |       |                          |
|-------|-------------|-------|--------------------------|
| _____ | Performance | _____ | Noise                    |
| _____ | Cost        | _____ | Durability/Repairability |
| _____ | Weight      | _____ | Other: _____             |

## 2. APPLICATION DATA

### Installation Position:

- Tractor
- Pusher
- Lifter
- Other

*(If this request is for multiple props/rotors, consider providing a labeled 3-view of the vehicle to denote installed positions: 1, 2, 3.etc)*

### Drive Engine/Motor:

Make/Model: \_\_\_\_\_

Rotation:  CW  CCW

*(viewed along the shaft axis facing the drive flange side of the prop/rotor  
 If both rotations are required on your vehicle, check both)*

Drive Attachment: \_\_\_\_\_

*Please provide the attachment drive flange specification, or an interface drawing showing the critical dimensions/tolerances/interface requirements if available*

Max Continuous: \_\_\_\_\_ HP \_\_\_\_\_ RPM

Takeoff: \_\_\_\_\_ HP \_\_\_\_\_ RPM

Min Spd (turbines only): \_\_\_\_\_ RPM

### Propeller System:

Props/Rotors per vehicle: \_\_\_\_\_

Diameter (max): \_\_\_\_\_

Installed Weight (preferred): \_\_\_\_\_

Polar Moment Limit (if any): \_\_\_\_\_

Preferred Blade Count (if any): \_\_\_\_\_

**Design Conditions:** *(please indicate engineering units for provided values, you can provide a separate table if you have more design points to include.)*

| Condition Name<br><i>(Takeoff, cruise, etc)</i> | Priority<br><i>(1=high)</i> | Inflow Velocity** | Altitude | Temp<br><i>(or Δ ISA)</i> | Power | RPM | Thrust Target<br><i>(if any)</i> |
|---|-----------------------------|-------------------|----------|---------------------------|-------|-----|----------------------------------|
|   |                             |                   |          |                           |       |     |                                  |
|   |                             |                   |          |                           |       |     |                                  |
|   |                             |                   |          |                           |       |     |                                  |

*\*\*Unless an inflow distribution is provided, RCT reserves the right to choose an inflow or analyze with uniform inflow.*

### 3. ACTUATION AND FEATURES

**Actuation:**

- Fixed Pitch
- Variable Pitch
  - Feathering
  - Reversing

Actuation Method: *(please provide interface details)*

- Hydraulic
- Mechanical

**Ice Protection:**

- De-Ice Desired (Electro-thermal)
- Anti-Ice Desired (Fluid)

### 4. ADDITIONAL NOTES/REQUESTS

If you have additional information to provide or request, please do that here: