STATEMENT OF WORK (SOW)

Frequency Converter Generator Procurement & Commissioning

305th Maintenance Squadron (305 MXS)
Joint Base McGuire-Dix-Lakehurst (JB MDL)

1.0 SCOPE

This Statement of Work (SOW) defines the requirements for the **procurement, delivery, and commissioning** of a frequency converter generator system. The unit will support electrical requirements at the main hangar door of the 305th Maintenance Squadron (305 MXS), located at Joint Base McGuire-Dix-Lakehurst (JB MDL).

Note: *Physical installation, mounting, and electrical integration into the facility will be performed by Base Civil Engineering (CE).*

2.0 BACKGROUND

The existing electrical infrastructure at the main hangar door does not provide adequate support for mission-essential equipment. A frequency converter generator is required to provide reliable 400 Hz power to support KC-46 and C-17 aircraft maintenance operations and ensure mission readiness.

3.0 REQUIREMENTS

3.1 Contractor Deliverables

- **Procurement:** Procure and deliver one (1) UFC-180H, 180-kVA Low Profile™ fixed frequency converter system/ or equal that meets or exceed the technical specification.
  - **Technical Specifications:**
  - **Input:** 380 to 480 V +10%/-15%, 3-phase, 50/60 Hz; full load input current 186 A (at 480 VAC).
  - **Output 1 & 2:** 115 V L-N / 200 V L-L, 3-phase, 4-wire, 400 Hz.
- **Logistics:** Provide all transportation and materials required for delivery to Bldg 2201.
- **CE Coordination:** Provide technical data, wiring diagrams, and installation manuals to Base CE to facilitate their installation process.

- **Commissioning:** Following installation by CE, the Contractor shall test and commission the unit to ensure full operational functionality and compliance with safety codes.
- **Training:** Train designated government personnel in basic operation, safety, and troubleshooting.
- **Documentation:** Provide as-builts (reflecting final configuration), user manuals, standard manufacturer warranty information, and maintenance instructions.

3.2 Performance Standards

All work and equipment shall comply with:

- National Electrical Code (NEC)
- OSHA Safety Standards
- Unified Facilities Criteria (UFC)
- JB MDL engineering and safety directives

4.0 PERIOD OF PERFORMANCE

- Project Initiation: **Work shall begin within 30 days of contract award/approved credit.**
- Total Completion: **Total project completion shall not exceed 180 days from Notice to Proceed (NTP), including delivery and commissioning, pending coordination with CE and safety.**

5.0 PLACE OF PERFORMANCE

Main Hangar Bldg 2201
305th Maintenance Squadron
Joint Base McGuire-Dix-Lakehurst, NJ
2201 Grissom Rd

6.0 GOVERNMENT FURNISHED SUPPORT

The Government (specifically Base Civil Engineering) will provide:

- Physical Installation: Mounting and securing the unit at the designated location.
- Electrical Connection: Connection of all electrical components and utility integration from the building to the generator.
- Site Access provided by 305 MXS : Escorts and location access for delivery and commissioning.
- Technical Data: Access to technical drawings and base utility maps (if available).

7.0 SAFETY AND ENVIRONMENTAL

- The Contractor must comply with JB MDL safety regulations during delivery and commissioning and submit a Job Safety Analysis (JSA) or Activity Hazard Analysis (AHA) prior to on-site work.
- All electrical commissioning work must be performed by licensed technicians.
- Waste materials generated during delivery/unboxing must be disposed of in accordance with EPA and base environmental guidelines.

8.0 OPSEC

"OPSEC - The contractor shall be responsible for safeguarding military information as outlined by the JB MDL Commander. Contractor personnel will not take photographs of military facilities, equipment or personnel unless cleared through the proper channels."

9.0 POINTS OF CONTACT

Primary POC:

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GENERAL SPECIFICATIONS

INPUT:

Input Current Distortion typically 3%	≤ 5%,
Voltage	380 to 480 volts,
	+10%, -15%, 3Ø,
Frequency	3 or 4 wire plus ground (Alternate Voltages Available)
Phase	
Rotation	45 - 65 Hz ± 10%
Protection	
	Any
Inrush Current	Over/undervoltage, loss of phase, overcurrent, short circuit. Voltage transient protection IAW IEEE C62.41.1, Location Cat. B/C
	No greater than 100% of full load current

ENVIRONMENTAL:

Acoustical Noise	< 65 dBA maximum at 5 feet (1.5m)
Temperature Range	-40°C to +55°C
Relative Humidity Condensing	10 - 95%, Non-
Ingress of Water	Type 3SX, IP55

ENERGY FACTORS:

Efficiency	94% typical at full load; 92% typical at half load; varies depending on configuration
Energy Efficiency Ratio	
	20.0 typical

OUTPUT:

Power Rating	120, 150, or 180 kVA (Specify)
Power Factor Range	0.5 lagging to 0.8 leading
Overload	100% continuous
	110% for 60 min
Voltage**	125% for 10 min
	150% for 2 min
* Crest	200% for 20 sec
Factor	115/200 volts, 3Ø,
Voltage Regulation	4 wire, grounded neutral
	1.414 ± 3%
Voltage Transients	± 1.0% under all conditions of line, balanced loads and temperature
Frequency	
Regulation	IAW MIL-STD-704F
Frequency Transients	400 Hz ± 0.01% under all conditions of line, load and temperature
Phase Angle	
Regulation	None
Harmonic	± 1° for balanced loads;
Distortion	± 2° for unbalanced loads
Protection	2.0% maximum
	Overload, short circuit, over/undervoltage and safety disconnect
Automatic Line Drop Compensation (ALDC)	15%

NOTE

***Also available 120/208 VAC, adjustable ±10%
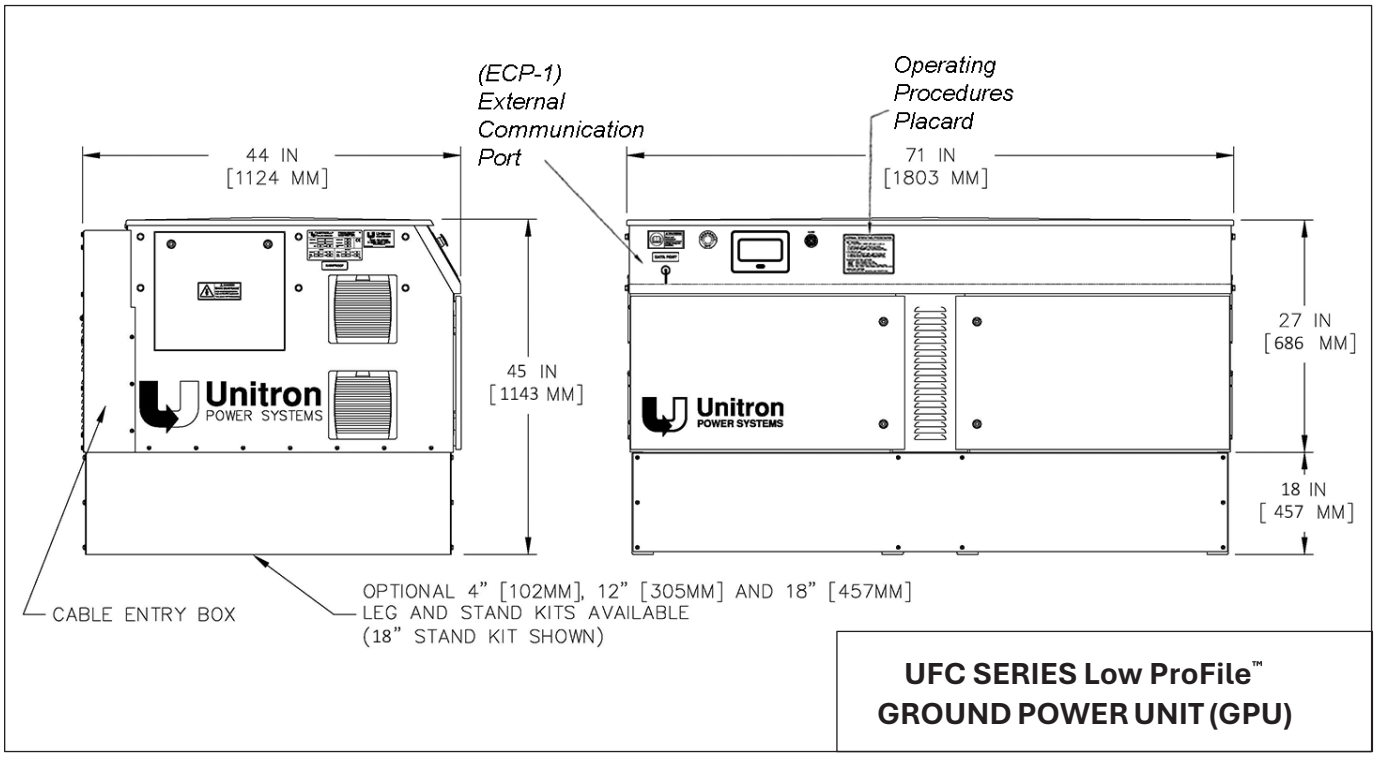
FIGURE 1