



Capability Statement 2026

FEA, CFD, CAD, DFMA, And Testing From One SDVOSB Team That Stays With You

UEI F99ZZK5LW6P5
CAGE 8ZK73 · active in SAM.gov
NAICS 541330, Engineering Services (primary)
Founded 2015 · Louisville, Kentucky



SBA-certified Service-Disabled Veteran-Owned Small Business (SDVOSB) and Veteran-Owned Small Business (VOSB)

COMPANY OVERVIEW

Pure Prime Solutions, Inc. (PPS) is certified by the U.S. Small Business Administration as a Service-Disabled Veteran-Owned Small Business (SDVOSB). PPS engineers run FEA, CFD, CAD, and DFMA in-house, with testing in-house, at a managed lab, or at your facility; every design goes through our design QC.

PPS uses a Stage-Gate-based product-development process and can combine DFMA, FEA, and CFD within a turnkey engineering engagement managed through a single point of contact. The result: the lowest total-cost design, plus the data and IP, from one team.

CORE COMPETENCIES

- **Finite element analysis (FEA):** stress, fatigue and buckling, nonlinear analysis, thermal analysis, vibration analysis, pressure vessel stress analysis.
- **Computational fluid dynamics (CFD):** fluid flow simulation, heat transfer, HVAC airflow, environmental and emissions CFD.
- **Multiphysics simulation and digital twins:** coupled thermal, structural and flow models that test a change before it moves a machine.
- **CAD design and drawings:** production-ready models and dimensioned drawings a supplier can quote and build.
- **DFMA and value engineering:** part-count, assembly and unit-cost reduction before tooling.
- **Product development:** concept through launch with Stage-Gate reviews, prototyping and testing, including HALT reliability testing.
- **Machine design, reverse engineering and R&D** for manufacturers and process plants.
- **Ethylene oxide (EtO) sterilization equipment engineering** and emissions control; backed by PPS's two U.S. patents for ethylene oxide recovery technology (US 10,738,020 B2 and US 10,815,209 B1).

HOW WE WORK

1 · Assess

Send your data.
The first step is a free assessment.

2 · Roadmap

A roadmap to the lowest total-cost design.

3 · Engineer

Analysis, design and test from one team.

4 · Deliver

The design, the data and the IP.

5 · Support

We stay with you after delivery.

WHY AGENCIES AND PRIMES CHOOSE PPS

- Federal buyers can use SDVOSB set-asides where they apply, a simpler path to award engineering work to us.
- A turnkey engineering engagement managed through a single point of contact, from assessment to delivery.
- If we agreed to resolve an issue, we fix it. If we missed something in our design QC, we fix it. If your supplier can't make the part, or it can't be bought, within three years of delivery, we fix that too.
- We sign your NDA or send ours before you share any data, and we reply within one business day.

INDUSTRIES SERVED

Aerospace and defense · Automotive · Power generation · Marine · Mining equipment · Cement and materials · Pharmaceutical and chemical process · EtO sterilization and medical devices · Air pollution control · Data centers

LEADERSHIP

Nick Duff

Co-Founder & Chairman, CEO

Aerospace stress engineer on flight-critical aerospace and defense programs · USMC veteran · M.Eng. and B.S. in Mechanical Engineering, University of Louisville

Tom Cushing

Co-Founder & CTO

Licensed Professional Engineer (PE) · Iraq veteran · MEng and MBA

NAICS CODES

- 541330** Engineering Services (primary)
- 541420 Industrial Design Services
- 541715 R&D in the Physical, Engineering and Life Sciences
- 541380 Testing Laboratories and Services
- 541512 Computer Systems Design Services
- 541614 Process, Physical Distribution and Logistics Consulting
- 541611 Administrative and General Management Consulting
- 333248 All Other Industrial Machinery Mfg.
- 333413 Industrial Fan, Blower and Air Purification Equipment Mfg.
- 333994 Industrial Process Furnace and Oven Mfg.
- 333998 All Other Misc. General Purpose Machinery Mfg.
- 339113 Surgical Appliance and Supplies Mfg.

PAST PERFORMANCE

References available on request.