WOLF Design Engineering

CAPABILITIES AND SERVICES

ISO 9001:2015

ENGINEERING

Mechanical / Electromechanical / Biomedical / Optical Product Design / Robotics

Wolf design engineers take your ideas from concept through production. We analyze your initial performance criteria, write design specifications, and design for functionality, cost and manufacturing. We can develop applications or embedded software, develop prototypes, design and implement validation and verfication tests and deliver a manufacturable product that meets or exceeds performance criteria.

COMMERCIAL PROJECT PORTFOLIO: Wolf's commercial design engineering team serves a growing and diverse client base.

Past projects: Lighting & optical design for industrial and commercial lighting companies, performance & verification testing for consumer products, design of robotic end effectors for pharmaceutical production lines, technical oversight for healthcare organizations including heart acoustics and monitoring, design consultation on medical appliances & medical waste disposal, design optimization of safety lighting for emergency vehicles, and analysis and consultation of vehicle dynamics for top racing organizations.

Design for Manufacturing

Wolf's design for manufacturing expertise can be applied to a new design or to re-engineering an existing product for cost reduction. Our manufacturing engineering practices reduce parts count and complexity; exploit the use of off-the-shelf components; review process routings, materials and vendors; lo




Additional Capabilities

» Prototyping
» Reverse Engineering
» Automated Equipment Design
» 3D Modeling and Animation
» Software/Firmware & Custom Database Applications
» Computer Simulations
» Test Protocol Development
» Process Analysis
» Failure Analysis
» 2D and 3D CAD

Equipment

» CNC Mill and Lathe In-house
» 3D Printing In-house
» Design and Test Facilities
» Drop Tower
» Computer Simulations
» Custom Test Fixture Design
» Total Station Surveying
» 3D Faro Laser Scanner
» Temperature Chamber

Wolf Technical Services, Inc.
9855 Crosspoint Blvd • Suite 126 • Indianapolis, IN 46256-3336
800.783.9653 • wolftechnical.com

WOLF Design Engineering

Engineering Excellence Since 1977




Design engineering, product development, innovation and commercialization for defense, consumer and medical industries

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WOLF Design Engineering

SMART • INNOVATIVE
DESIGN • RESULTS
40 Years

ISO 9001:2015

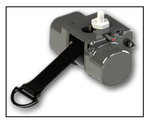
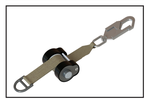
Wolf Design Team: From Initial Concept Through Product Design and Manufacturing

Since 1977, Wolf Technical Services, Inc. (Wolf) has applied engineering expertise to safety-related technical challenges in aviation, motorsports, ground transportation, medical and electrical design, biomedical design and systems engineering. Wolf uses computer simulations and years of forensic engineering experience to analyze the causes and effects of less-than-optimum designs. Consequently, Wolf is proficient in thorough troubleshooting throughout the design process as well as structured system analysis. Wolf design engineers have a broad range of experience in several consumer, medical and defense industries, making us an ideal product development partner. Let us help you take your ideas from concept through production. Partnering with Wolf results in a product ready for manufacturing that meets or exceeds performance criteria while minimizing cost and complexity.

Engineering disciplines in-house: • Mechanical • Electrical • Biomedical • Optical • Materials Science • Automotive • Software & Firmware • Aerospace • Manufacturing • Civil. Our staff has expertise in cruise missile guidance systems, robotics, electromechanical design, biomedical device design, electro-optics, optical design, test equipment design, control systems, instrumentation, acoustical design, automotive lighting design, image processing, and 3D and motion visualization.

DESIGN HIGHLIGHTS: MILITARY PROJECT PORTFOLIO:

Aircrew Restraint Systems

UMARS: AIR FORCE
An energy absorbing system with intelligent sensing and locking that limits aircrew motion during a crash or dynamic event. The X-Turn variant locks the webbing after engagement and includes a push button release and a special coating for helmet protection.

CMARS: NAVY
An advanced electronic device designed to provide freedom of movement under normal conditions, but immediately lock if an acceleration limit is reached, preventing further extraction of the belt. This improves the probability that a crew member working near an open door or cargo bay would remain within the aircraft, thus reducing the chance for serious injury or fatality.

IMARS: NAVY
An energy-absorbing restraint aircrew system that stays with the aircrewman rather than the aircraft.

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PRODUCT DESIGN

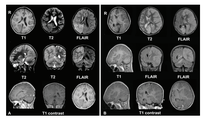
MILITARY PROJECT PORTFOLIO: Wolf's focus is safety for military personnel.

BioMedical & Robotics Systems

Cricothyrotomy Field Instrument
• All-in-one device for opening an airway on the battlefield
• Enhances success rate
• Streamlines cricothyrotomy training

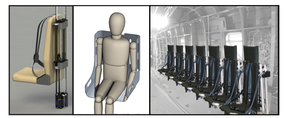
Modular ATD (Blast Test Dummy)
• Anthropomorphic Test Device for underbody blast testing
• Frangible skeletal system
• Head trauma measurement
• Instrumentation for acceleration and loading

Robotic Eddy Current Inspection
• Robotic arm automates the inspection of steam condensers and heat exchangers
• Improves inspection accuracy and reporting
• Replaces manual labor, improves safety



Brain Cooler
• Lowers brain temperature to prevent encephalopathy after trauma
• Maintains temperature through intranasal conduction
• Portable and field deployable

Air & Ground Crew Seating Systems



Blast Seat
• Passive energy-absorbing (EA) seat for ground vehicles
•Automatically adapts EA performance for occupant weight and blast pulse

Back Extraction Blast Seat
A component added to the blast seat to provide a safe and efficient means for evacuating an injured occupant.

EA Troop Seat - Helicopters - Aircrew
• Crashworthy, stowable helicopter troop transport seat

Sensor and Optical Systems

Daylight Glare Reduction
• Active light attenuation system
• Reduces sun glare from telescope imagery
• Improves capacity to track and image satellites and space objects near the sun

Weigh in Motion system (WIMS)
• Detect anomalously loaded vehicles such as those with IEDs
• Accounts for lateral weight shift of turning vehicles

Digital Flight Glove
• Reads hand gestures and finger postures
• Tracks gross hand motions in 3-space
• Convert gestures into digital communication

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