



AEROSPACE & DEFENSE

# PRODUCT PORTFOLIO

Precision-engineered components for mission-critical systems

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# INTEGRATED U.S. MANUFACTURING PLATFORM

Kelco Industries unites four specialized divisions to deliver integrated components and assemblies designed for aerospace and defense applications. Our U.S.-based manufacturing platform and AS9100/ISO-certified processes ensure reliable performance, traceability, and compliance for mission-critical systems.

## GUARDIAN ELECTRIC

Control grips & electromechanical components for aircraft, ground vehicles, and marine systems

## FLEX-WELD

Metal bellows, expansion joints & hose assemblies for propulsion and exhaust structures

## WESTERN CONSOLIDATED TECHNOLOGIES

High-performance PTFE and elastomeric seals, gaskets, and custom sealing systems

## ADVANCED MOLDING TECHNOLOGIES

Precision molded components and assemblies for demanding aerospace and industrial applications

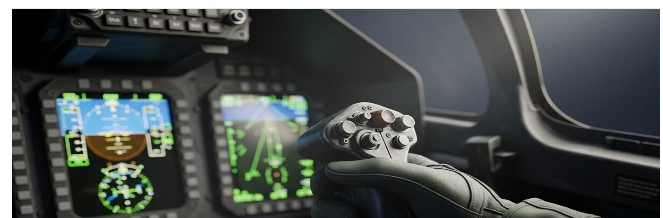
✓ AS9100/ISO Certified    ✓ ITAR Compliant    ✓ U.S.-Based Manufacturing    ✓ Full Traceability

## DIVISION

# GUARDIAN ELECTRIC

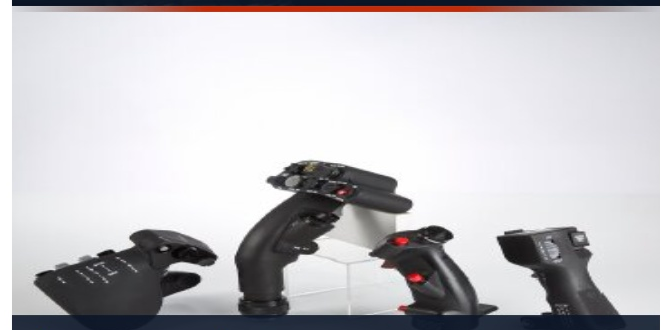
## CONTROL GRIPS & ELECTROMECHANICAL COMPONENTS

- High-performance control grips for aircraft, ground vehicles, and marine systems with ergonomically placed switches for intuitive, flight-critical operation
- Sealed pushbuttons, toggles, microswitches, relays, and solenoids engineered for harsh environments and long service life
- Custom-engineered assemblies meeting MIL-SPEC and aerospace standards with prototyping and full traceability
- Decades of experience and rigorous quality control delivering proven reliability for mission-critical programs



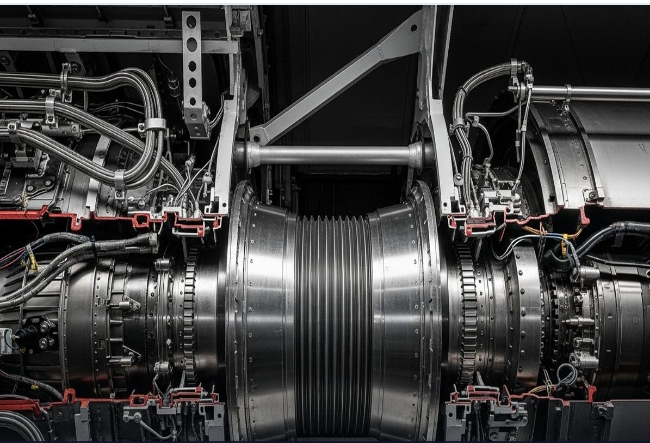
### IN APPLICATION

HOTAS Grip — Fighter Cockpit

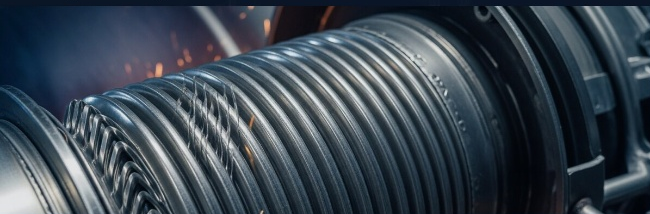


### THE PRODUCT

Guardian Electric control grip assembly

**IN APPLICATION**

Engine Bay Flex Joint

**THE PRODUCT**

Metal Bellows Assembly

**DIVISION****FLEX-WELD****METAL BELLOWS & EXPANSION JOINTS**

- Metal bellows, multi-ply expansion joints, and hose assemblies that absorb vibration, thermal expansion, and misalignment while maintaining leak-free performance
- High-pressure, high-temperature designs with corrosion-resistant alloys for propulsion systems and exhaust structures
- Built to ASME Section VIII and MIL-SPEC requirements with ISO-certified U.S. manufacturing and rigorous testing
- Custom designs and fast-turn prototyping for unique aerospace and defense applications

**DIVISION****WESTERN CONSOLIDATED TECHNOLOGIES****HIGH-PERFORMANCE SEALING SOLUTIONS**

- Precision PTFE and elastomeric seals, gaskets, and custom sealing systems for extreme temperature, pressure, and chemical exposure
- FDA-compliant and AS9100/ISO-certified manufacturing ensures traceability and cleanliness for aerospace and defense
- Fluoropolymers, elastomers, and engineered plastics optimized for static and dynamic sealing interfaces in propulsion, actuation, fuel, and environmental control systems
- Prototyping and application engineering for custom geometries and assembly integration

**IN APPLICATION**

Hydraulic Actuator Sealing

**THE PRODUCT**

PTFE Seals &amp; Gaskets



DIVISION

## GUARDIAN ELECTRIC

### SOLENOIDS & ACTUATORS

- Custom, tubular, frame, latching, laminated, and explosion-proof solenoids engineered for precise, reliable actuation in aerospace and defense environments
- Landing gear systems:** solenoid-controlled hydraulic valves managing precise gear extension, retraction, and uplatch sequencing on fixed- and rotary-wing platforms
- Oxygen deployment:** spring-loaded solenoid actuators triggering drop-down passenger oxygen mask systems on commercial aircraft
- MIL-SPEC and DO-160 qualified; hermetically sealed options rated to 100M+ cycles with low power draw for battery-constrained systems

DIVISION

## GUARDIAN ELECTRIC

### RELAYS & ELECTROMECHANICAL SWITCHES

- Electromechanical relays and hermetically sealed relay assemblies for flight-critical power switching, load control, and circuit protection in avionics systems
- Pushbutton, toggle, and rocker switches for cockpit instrument panels, weapons stations, and aircraft ground support equipment
- Compliant with MIL-R-39016, MIL-S-8805, and DO-160 shock, vibration, and humidity requirements for demanding airborne and ground-vehicle applications
- Custom contact configurations, gold-plated contacts, potted housings, and conformal-coated assemblies available to program-specific requirements



## WHERE OUR PRODUCTS ARE FOUND

**GE** = Guardian Electric   **FW** = Flex-Weld   **WCT** = Western Consolidated Technologies



### PLATFORM

## FIXED-WING AIRCRAFT

F-16 • F-35 • F/A-18 • B-52 • C-17

**GE**

HOTAS control grips •  
weapon release  
switches • avionics  
toggles

**FW**

Engine exhaust flex  
sections • heat shield  
joints • bleed air  
bellows

**WCT**

Hydraulic seals • fuel  
line seals • actuator  
rod seals



### PLATFORM

## ROTARY-WING AIRCRAFT

UH-60 • AH-64 • CH-47 • V-22 • H-1

**GE**

Collective/cyclic grip  
controllers • chin turret  
controls • cargo hook  
switches

**FW**

Anti-vibration isolation  
joints • HVAC flex  
bellows • engine bay  
joints

**WCT**

Rotor shaft seals •  
gearbox seals • fuel  
control valve seals



### PLATFORM

## GROUND COMBAT VEHICLES

M1 Abrams • Bradley • Stryker •  
JLTV • AMPV

**GE**

Turret traverse grips •  
weapon station HOTAS  
• driver control  
assemblies

**FW**

HVAC expansion joints  
• exhaust flex  
couplings • coolant  
bellows

**WCT**

Environmental door  
seals • fuel tank  
gaskets • hydraulic  
actuator seals

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### PLATFORM

## NAVAL SURFACE & SUBSURFACE

DDG • SSN • LCS • LPD • CVN

**GE**

Combat system controls • CIC station grips • weapons handling switches

**FW**

Pipe expansion joints • exhaust riser bellows • propulsion flex joints

**WCT**

Through-hull shaft seals • sea water seals • valve packing seals



### PLATFORM

## MISSILES & MUNITIONS

AIM-9 • JASSM • SM-6 • MLRS • PAC-3

**GE**

Launch control switches • weapon safety interlocks • arming components

**FW**

TVC nozzle bellows • propellant duct joints • warhead flex joints

**WCT**

Guidance section o-rings • propellant seals • fuze cavity seals



### PLATFORM

## SPACE & LAUNCH SYSTEMS

Launch vehicles • upper stages • satellite ground support

**GE**

Ground support equipment controls • launch panel switches • abort grips

**FW**

Propellant line bellows • cryo duct joints • engine gimbal flex sections

**WCT**

Cryogenic valve seals • propellant manifold seals • pressure vessel gaskets

## WHY PARTNER WITH KELCO INDUSTRIES

**INTEGRATED. CERTIFIED. MISSION-READY.****SINGLE-SOURCE PARTNER**

Control grips, electromechanical components, metal bellows, and precision seals — all available from a single U.S.-based supplier. Consolidating your supply chain under Kelco eliminates vendor management overhead, shortens lead times, and reduces program risk across all phases from development through full-rate production.

**FASTER DEVELOPMENT CYCLES**

In-house prototyping and application engineering across all four divisions means design iterations happen quickly, not months away. Our engineering teams work directly alongside customers from concept review through qualification testing, accelerating time-to-field for critical programs.

**CERTIFIED & COMPLIANT**

All Kelco divisions operate under AS9100/ISO 9001 certification with full ITAR compliance and U.S.-only manufacturing. Rigorous first-article inspection, material traceability, and lot-controlled documentation ensure every part ships with the evidence packages your program office requires.

**CUSTOM ENGINEERING**

Non-standard geometries, extreme operating environments, and multi-material assemblies are routine at Kelco. Our engineers design to MIL-SPEC and customer-unique requirements, delivering optimized solutions for control interfaces, flex joints, sealing systems, and precision electromechanical assemblies that off-the-shelf components cannot match.

**FULL DOCUMENTATION & TESTING SUPPORT**

Comprehensive test reports, material certifications, first-article inspection records, and regulatory documentation are provided with every order. Kelco supports DFARS compliance, qualification test witnessing, and program audit readiness — giving your program office everything needed to move from prototype through production delivery with confidence.



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