



***WORLD-CLASS PRODUCTS,
MANUFACTURING & INTEGRATION***

morrell
We Keep Things Moving



MorrellGroup
Evolution in Controls
A MorrellGroup Company

WORLD-CLASS PRODUCTS, MANUFACTURING & INTEGRATION



With full service design and engineering services, a line card comprised of the machine and motion control industry's most trusted brands, and a comprehensive customer support network; Morrell is much more than a distributor. Our commitment to providing intelligent solutions means we are perfectly positioned to execute all of your motion control requirements.

The Morrell Approach is based on a solid foundation of customer service. Our sales approach is one of consultation: Our experience in manufacturing and full system integration means Morrell stands ready to provide the fluid power, automation, and engineered solutions required to keep efficiency and uptime at their highest levels.



WE'RE IN YOUR REGION:

We are proud of our geographical coverage that ensures we can act proactively to our customers' needs. Morrell has twelve facilities located throughout the United States and Canada to guarantee our customers have access to the right components at the right time. Our computerized inventory system ensures complete procurement capabilities 24/7/365 for all of our customers' uptime needs.

Auburn Hills, Chicago, Cleveland, Evansville, Fort Wayne, Gary, Grand Rapids, Indianapolis, Saginaw, South Bend, Toledo, and Windsor.

Automation

- Pneumatic
- Motion Controls
- Machine Controls
- Mechanical
- Safety

Fluid Power

- Hydraulic Components
- Lubrication Components
- Process Control

Engineered Solutions

- Hydraulic Power Units
- High Pressure Coolant Systems
- Pneumatic Systems
- Lubrication Systems
- Weld System Integration
- Cable Assemblies

Stegner Controls

- Concept
- Design & Engineering
- Product Engineering
- Prototype & Test
- Manufacturing
- Quality
- Software Solutions
- Professional Resources

WESS

- Electrical Engineering
- Fluid Power Engineering
- Machine Integration
- Panel Build
- Software Programming
- Field Wiring
- Cad Services
- Logic Debug
- Field Service & Support
- Weld System Service

Rexroth Bosch Group

Electric Drives and Controls

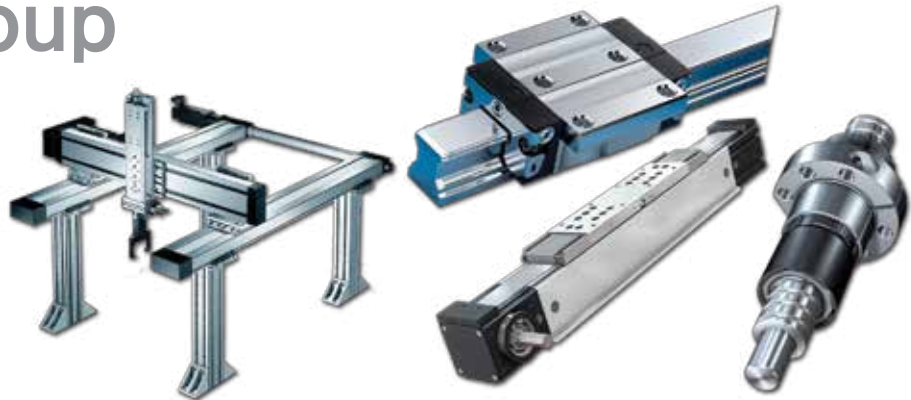
- CNC Controls
- PLC Controls (IEC 61131)
- HMI's
- AC Servo Drive Systems
- Induction Spindle Drives to 500 H.P.
- Total Machine Control Systems
- Frameless Spindle Motors and Drives
- Linear Motor Systems
- Open PC Based Controls
- Single and Multi-Axis Control Systems



Rexroth Bosch Group

Linear Motion and Assembly Technologies

- Ball & Roller Rail Systems
- Ball Screws
- Ball Transfers
- Linear Bushings & Shafting
- Linear Motion Systems
- Cartesian Motion Systems
- Electric Cylinders
- Tychoway Bearings



AVENTICS

Pneumatics Division

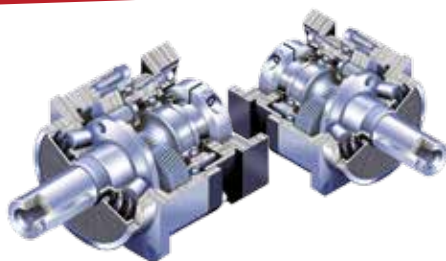
- Air Valves
- ISO Mount
- FRL Units
- ISO Valves
- NFPA Cylinders
- Rodless Cylinders
- E/P & I/P Valves
- Multi-Axis Pneumatic Systems





APEX DYNAMICS, USA

- Right Angle Bevels
- Inline Servo Planetary Gearboxes
- Right Angle Servo Planetary Gearboxes
- Two Week Delivery and Five Year Warranty



EUCHNER

More than safety.

- Position & Limit Switches
- Multiple Limit Switches, Trip Rails/Dogs
- RFID Systems & HH Terminals
- Enabling Switches
- Safety Switches
- Joystick, Hand-Wheel & Pendant Stations
- Electronic Key Systems
- WERMA Signaling Technology



SICK



Standard Sensors

- Inductive Proximity Switches with ASIC Technology
- Capacitive and Magnetic Proximity Sensors
- Pneumatic Cylinder Sensors including magnetic with analog position output
- Standard and Fiber Optic Photoelectric Sensors
- Laser Measurement Sensors
- Ultrasonic Sensors

Machine Vision/Advanced Sensors

- Vision Sensors
- Color Vision Sensors
- Color/Contrast/Luminescent Sensors
- Photoelectric/Ultrasonic/Laser Fork Sensors
- Array Laser Sensors
- Optical Displacement Laser Measurement Sensors/Controllers
- 2D and 3D Vision Systems

Encoders

- Absolute and Incremental Rotary Encoders
- Linear Encoders/Wire Draw Encoders
- Motor Feedback Systems
- Fully Programmable Encoders

Machine Safety

- Opto-Electric Safety Devices including Light Curtains, Safety Laser Scanners, Safety Photo Eyes and Safety Vision Systems
- Electromechanical/Non-Contact Safety Switches
- Emergency Stops/Rope Pull Emergency Stops/Enabling Switches
- Safety Relays and Safety Controllers
- Safety Field Bus Systems
- Risk Assessment Software

Automatic Identification

- Fixed and Handheld Bar Code Readers/Scanners
- 1D Linear Bar Code Lines Scanners
- 2D/DPM Bar Code Readers
- Omni-Directional Bar Code Systems
- Vision Based Bar Code Readers
- Volume Measurement Systems
- Laser Measurement Systems
- RFID

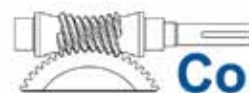
Industrial Instrumentation

- Pressure Sensors/Transducers
- Liquid/Solid Level Sensors

ATLANTA

Rack & Pinion Drive Systems

- Helical & Straight Tooth
- Hardened & Ground
- Induction Hardened
- Soft



Cone Drive

- Worm Gear Boxes
- Servo Gear Boxes
- Industrial Gear Boxes
- Industrial Gear Sets
- Gear Motors

EXLAR

- High Capacity Roller Screws
- Servo Electric Cylinders
- Precision Rotary Actuators

MURR ELEKTRONIK

- Molded Cord Sets
- Signal Devices
- Connector Systems for Sensors
- Systems for Decentralized Installation Technology
- Power Supplies



nexen

- High Speed RPS Rack & Pinion
- Rail Brakes



- Couplings
- Motor Mounts
- Torque Limiters

KTR COUPLINGS

- Couplings
- Torque Limiters
- Clamping Elements
- Torque Measurement

R+W COUPLING TECHNOLOGY

- Couplings
- Line Shafts
- Torque Limiters

Rexroth Bosch Group

Industrial Hydraulics Division

- Pumps – Motors – Electronics
- High Flow Directional Control Valves
- High Response Proportional Valves
- Servo Valves
- Proportional Controls
- Standard and Custom Manifolds
- Proportional Valves

Mobile Hydraulics Division

- Hydrostatic Transmissions
- Pumps
- Motors
- Valves
- Proportional Valves
- Can-Bus Controls



LINCOLN

- Centralized Lubrication Systems
- Grease or Oil Systems
- Circulating Oil Systems
- Single Line Series Progressive Systems
- Assembly Lubrication

- Chain Lubrication
- Minimum Quantity Lubrication
- LubriLean Systems
- Vogel/Spandau Pumps
- Centrifugal Immersion Pumps
- Sealless Immersion Pumps





HYDAC

Hydraulics Division

- Engine Cooling Systems
- Pressure and Return Line Filtration
- Clamps, Check Valves & Flow Controls
- High Pressure Ball Valves and Actuators
- Accumulators and Pressure Vessels
- Air/Oil and Water/Oil Cooling Systems
- Compact Power Units
- SAE Cartridge Valves and Manifolds
- Fluid Service Mobile Unit
- Automatic Back Flush Filters

Electrical Division

- Pressure Transducers
- Temperature Transducers
- Electronic Level Control
- EDS Pressure Switches
- HMG Diagnostic Kits



- Planetary Wheel Drives
- E-Trac Electrical Wheel Drives
- Aftermarket and OEM Differentials
- Planetary Swing Drives



- Gear Pumps
- Gear Motors



- Removal of Ferrous Contaminants
- Pressure, Return and Suction Filters
- Permanent Reusable Elements



- Custom CNC Bent Tube Assemblies
- Hose Assembly Kits
- Standard and Custom Fitting Adapters



- High Performance Screw-In Hydraulic Cartridge Valves
- Valve Packages and Assemblies
- Manifolds
- Only Available in Indiana



- Pressure Gages
- Temperature Instrumentation



- Low Speed High Torque Hydraulic Motors
- Hydraulic Orbital Steering Control Units
- Hydraulic Rotary Manifolds
- Radial Piston Motors

HYDRAULIC POWER UNITS



Morrell's hydraulic power units provide regulated, pressurized, and fully filtered flow to hydraulic motors, cylinders and a wide array of additional hydraulic components. With modular designs that allow for ease of maintenance, our shared goal of optimizing your precious plant floor space is of paramount importance; our hydraulic power units are built with your productivity and efficiency in mind.

HYDRAULIC POWER UNITS FEATURE:

- Low Noise
- Low Vibration
- Reduced Heat Generation
- Space-Saving Vertical Designs

PROCESS SOLUTIONS



Morrell offers high pressure coolant systems to virtually every major industry. These self-contained units provide filtration and integrated electric controls to fit into new or pre-existing manufacturing systems. Our industry-proven designs allow for custom sizes up to 1200 gallons, with maximum pressures up to 1500 psi and robust standard pumps. The systems' modular designs allow for maximum ease of use, maintenance and modification.

HIGH PRESSURE COOLANT SYSTEMS FEATURE:

- Accu-Pressure Technology
- Reduced Floor Area
- Increased Filter Surface Area
- Direct Operating Relief Valve
- Modulating Fill Valve

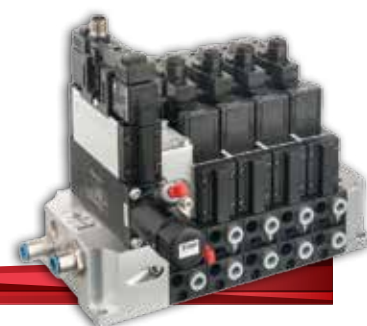
PNEUMATIC SYSTEMS



Morrell provides standard and custom pneumatic systems to meet the demanding requirements in today's manufacturing environments. From single valve solutions to custom engineered pneumatic panels, Morrell can provide the right pneumatic solution to meet your machinery requirements.

PNEUMATIC SYSTEMS FEATURE:

- Low Maintenance
- Clean Technology
- Quiet Operation
- Precise Control



LUBRICATION SYSTEMS



If there is a ground floor to basic machine maintenance it is automatic lubrication. Properly designed lubrication systems reduce overall lubricant use by up to 50% and decreases energy use by up to 20%. The key is finding the right lubrication solution for your needs.

LUBRICATION SYSTEMS FROM MORRELL PROVIDE:

- Longer Equipment Life
- Increased Uptime
- Less Personnel Exposure to Dangerous Equipment
- Lower Inventory
- Reduced Product Contamination

CABLE ASSEMBLIES / WIRING HARNESSSES



Maximum flexibility, increased lifespan, and overall reliability are just a few of the reasons our customers depend on our cable assemblies and wiring harnesses for stationary and mobile applications. Our experience in the most regulated industries on the globe has positioned Morrell as a perfect choice to serve as a single-source provider of these crucial electrical components.

CABLE ASSEMBLIES / WIRING HARNESSSES PROVIDE:

- Custom Cable Configurations
- Servo Cables
- Panel-to-Panel
- Interconnect Cables
- Robotic Cables
- Fiber Optic Cables
- Custom Cable Configurations
- On-Vehicle Wiring Harnesses

SAFETY SOLUTIONS



Morrell's portfolio of safety products is designed to protect the two most important assets our customers possess: Their people and the machines they operate. The personal safety systems and components we offer provide regulatory compliance in the United States, European Union, Canada, and Japan. Morrell's engineering and product expertise encompass areas of potential risk to protect your people, machines, and quality of your final product.

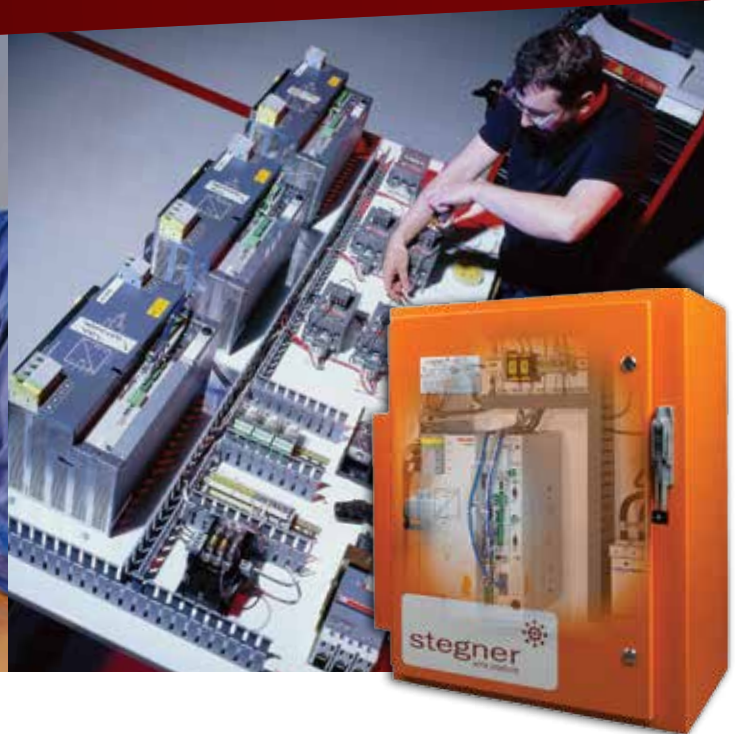
SAFETY SOLUTIONS PROVIDE:

- Risk Assessment Software
- Position Switches
- Limit Switches
- RFID Systems
- Joysticks/Hand Wheel/Pendant Stations
- Standard Sensors
- Machine Vision/Advanced Sensors
- Encoders
- Machine Safety
- Automatic Identification
- Industrial Instrumentation
- Safety Mat Systems



stegner

controls



**ELECTRICAL ENGINEERING
FLUID POWER ENGINEERING
MACHINE INTEGRATION
PANEL BUILD
SOFTWARE PROGRAMMING
FIELD WIRING
CAD SERVICES
LOGIC DEBUG
FIELD SERVICE & SUPPORT
WELD SYSTEM SERVICE**

Automation and

Assembly Control Systems:

- Body Shop Welding
- Frame & Chassis Welding
- Test & Simulation Programming
- Robotic Manufacturing Cells
- Material Handling
- Automated Inspection
- AGV/ASRS Systems
- Specialty Machines

CNC Machine Control Systems:

- Complete CNC Integration
- Software Design & Programming
- Part Programming & Production Assistance
- Diagnostic System / FIS Programming
- Automation Integration
- Electrical & Fluid Power Controls Upgrades
- Machine Retools & Retrofits
- Obsolescence Product Replacements

Fluid Power Controls Engineering:

- Hydraulics, Pneumatics, Coolant (Low & High Pressure), Lubrication & Duct Layouts
- Hydraulic Power Units & Coolant Tanks
- Complete Valve Plate Layouts & Build
- Detailed Piping Layouts
- Complete System Plant Layout
- On-Site Trouble Shooting (Including Excessive System Heat Generation)
- Retools: New Station Additions, Deletions & Manuals
- Electronic File Translating
- Americanization of Electronic File Symbolology
- Extensive Standard Library (Created Over 25 Years)
- CAD Detailing (Including Converting Old Board Drawn Tracings to CAD Drawings)

Weld Control Systems:

- Precision Spot Welding
- General Purpose Resistance Welding
- Short Duty / High Current Applications
- Aluminum Welding
- Seam Welding
- Projection Welding
- High Current Flash Welding or Flash / Butt Welding
- Press Welding
- Advanced Welding

Machine Tool:

- Electrical, Pneumatic, Hydraulic Design, Coolant, Lubrication, Duct Layout
- Software Development
- HMI / GUI Programming
- Complete Panel Build Services
- Complete Pipe & Wire Services
- Proposal Support
- Retools: New Station Additions, Deletions & Manuals
- Logic Upgrades

Transplant Machine Services:

- Americanization of Off-Shore Electrical Hardware
- Americanization of Off-Shore Software
- Americanization of Electronic File Symbolology
- Panel Assembly to OSHA, UL, JIC, NEC, & Automotive Standards Using Domestic Content
- Field Wiring & Electrical Services
- Integration of Hydraulic, Pneumatic, Coolant & Lube Systems
- Start-Up and De-Bug of Control System Domestically
- Documentation Preparation to Comply with Automotive Standards
- After Sales Machine Service & Production Support



CONCEPT
DESIGN & ENGINEERING
PRODUCT ENGINEERING
PROTOTYPE & TEST
MANUFACTURING
QUALITY
SOFTWARE SOLUTIONS
PROFESSIONAL RESOURCES

Concept:

- Facility Planning
- Process Planning
- Product Planning
- Concept Planning
- Laser & White Light Scanning

Design and Engineering:

- Electrical Engineering
- Mechanical Engineering
- Manufacturing Engineering
- Fluids Engineering
- Product Engineering
- Process Engineering
- Systems Engineering

Prototype and Test:

- Virtual Prototyping
- Root Cause Analysis
- Process Analysis
- Product Development
- Software Development
- Virtual Simulation
- Testing & Validation
- Ergonomic Studies

Manufacturing:

- System Integration
- System Installation
- Program Management
- Sourcing & Procurement
- Custom Solutions
- Machine Build
- Mechanical Build
- Electrical Build

Quality:

- Continuous Improvement
- Dimensional Analysis
- Checking Fixture Design & Build
- Preventive Maintenance Programs
- Process & Design Optimization
- Laser & White Light Scanning
- Root Cause Analysis

Professional Resources

and Software Solutions:

- Program / Project Managers
- Multidisciplinary Engineers
- CAD Designers
- On-Site / Off-Site Global Solutions
- Technology Transfers Training
- Over 300 Software Seats



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