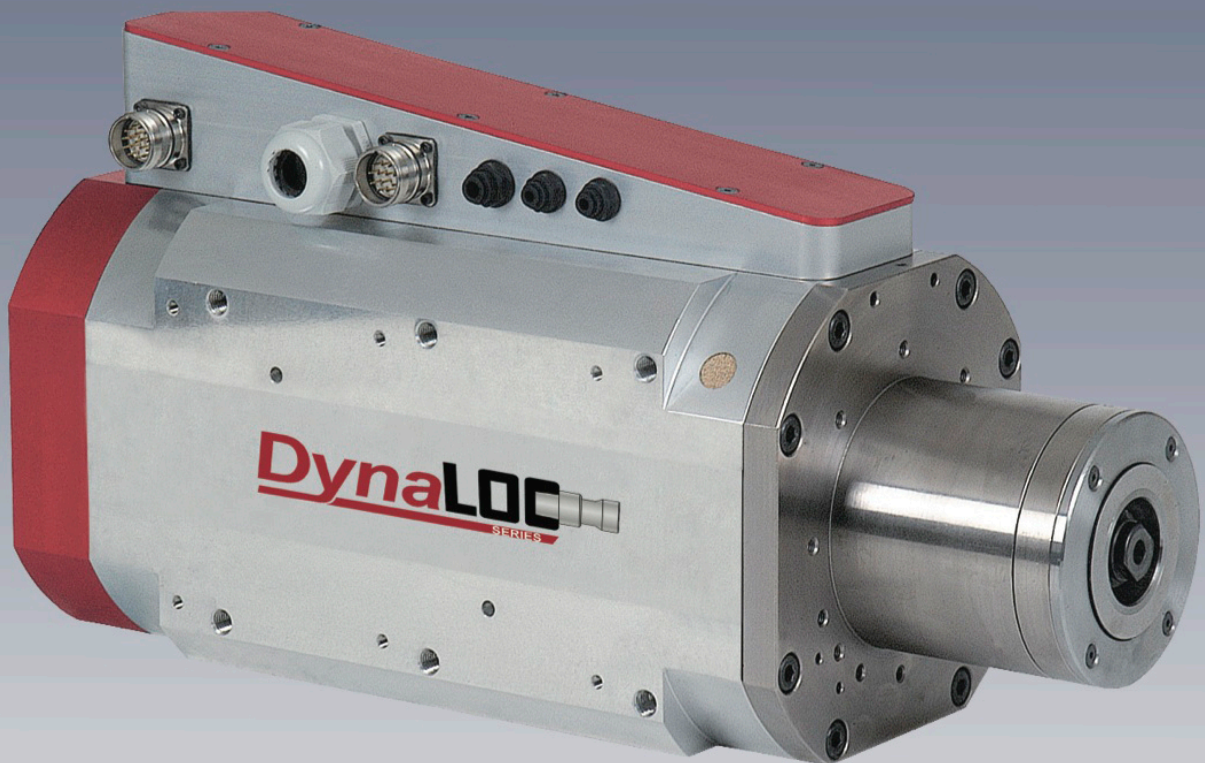


# YOUR GLOBAL SPINDLE PARTNER

- High-Performance Spindles
- Spindle Repair / Rebuild Service
- Spindle Retrofits and Upgrades





**Superior Quality  
Innovative Designs  
Greatest Value**

## Industry Leader in Precision Dynamic Spindles



Since 1996, Precision Drive Systems (PDS) has grown to an industry leader in precision high-speed spindles, offering a broad range with over 150 models, power up to 30 kW (40 hp), and speeds up to 60,000 rpm. The latest technology and innovative design is key to PDS success and further enhanced with a full complement of spindle accessories to increase performance and your manufacturing efficiency.

PDS spindles and accessories create technical harmony and offer a perfect solution for machine manufacturers and robotic applications; such as grinding, deburring, milling, routing, trimming, polishing, and contour machining.

PDS is a global network of full service precision spindle repair and manufacturing facilities located in the United States, Canada, Germany and Brazil. PDS serves a broad range of market sectors, including: aerospace, automotive, bus, composites, marine, RV, thermoforming, truck, energy, furniture manufacturing, and major appliance industries.

Advanced engineering technology, customer support, and our focus on value differentiates PDS from the competition. Our experience in spindle rebuild and retrofit upgrades are enhanced through in-house engineering, producing new innovative products, delivering the highest performance and value to our customers.

# High-Performance Spindle Solutions: New, Replacement, Repairs and Retrofits

Visit our website: [www.pdscolumbo.com](http://www.pdscolumbo.com)

## Complete Spindle Service

- New standard and custom spindles for machine and robotic applications
- Expert PDS spindle service for all brands, makes, and models
- High speed spindles
  - Electric AC
  - High-torque
  - Belt-driven
  - Multi-spindle configurations
  - Multi-axis contouring spindles
  - Spindle aggregates and accessories
- Variable-frequency drives
- Complete tool holding and clamping accessories

## Mission Statement

Precision Drive Systems will maintain the position of Global Leader of precision spindle producers by providing superior quality, service and innovation that delivers the greatest value for:

- Our customers
- Our employees
- Our shareholders



## Evolution of PDS Success



# SPINDLE SERVICES

## Expert Rebuild, Retrofit and Upgrade Services

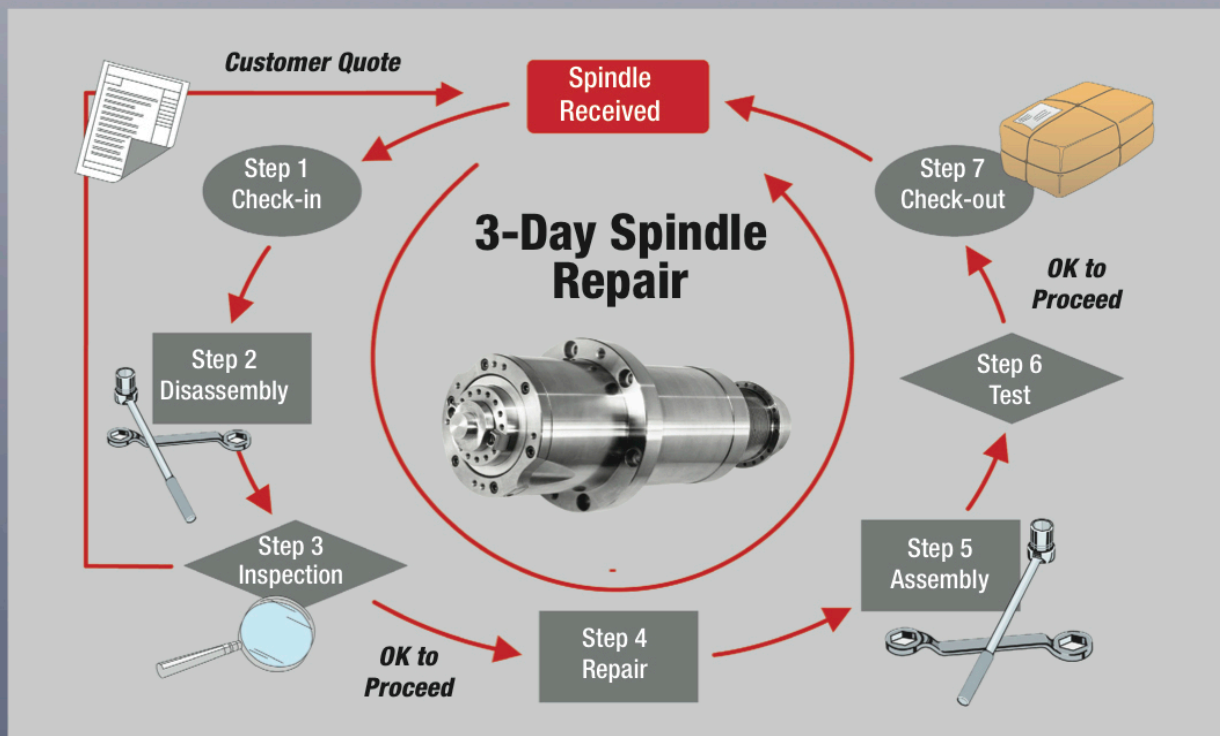
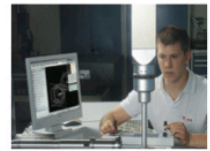
No matter what brand or type spindle you have – whether belt-driven or motorized, machining wood, composites, plastics or metals– PDS is your source for expert spindle repair and upgrade services. Our spindle repair centers are world-class facilities staffed by highly trained technicians.

Our spindle technicians are highly experience and expertly trained in diagnostic failure analysis, dynamic balancing, and advanced assembly / runoff techniques.

In-house engineering enables us to perform detailed spindle failure analysis to identify and correct deficiencies providing enhanced performance, increased reliability, and manufacturing efficiency. This results in repair that meets or exceeds original manufacturers specifications.

### Professional Spindle Service

- Customer focused spindle repair
- Free spindle inspection and evaluation
- Standard repair service work completed within **3 business days**
- Spindle retrofits and performance upgrades
- Written factory warranty for rebuilds and upgrades
- Expert customer focused failure analysis
- Emergency 24-hour spindle service available



# APPLICATION

## The Right Spindle, for the Right Job

Precision Drive Systems is a global manufacturer and supplier of precision spindles offering a wide variety of off-the-shelf models specializing in high-speed electric designs – ranging to 30 kW (40 hp) with speeds up to 60,000 rpm – as well as related spindle accessories.

PDS serves a broad range of customers and industries, from OEMs to the end user:

- Aerospace
- Automotive
- Bus and RV
- Composites
- Energy
- Furniture
- Major Appliance
- Marine
- Thermoforming
- Truck

## Giordano Colombo Spindles

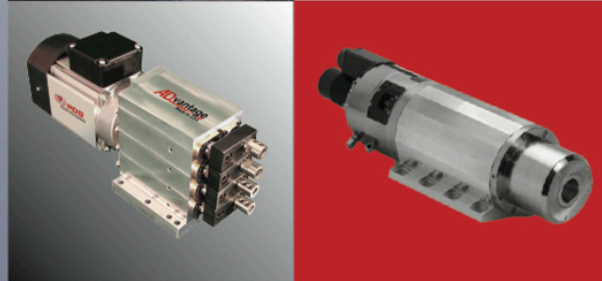
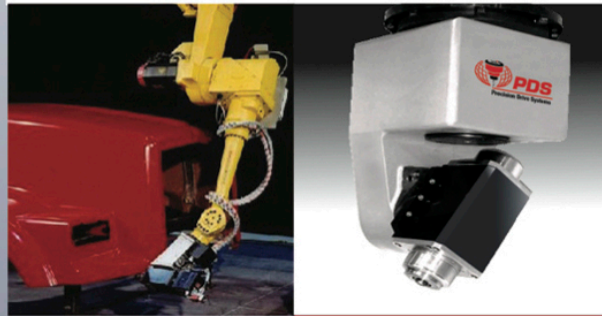


Precision Drive systems is the authorized sales and service provider for all Giordano Colombo Spindles in North America.



## Spindles and Accessories Tailored to Your Application

Count on PDS for all your spindle needs. PDS can provide and optimize your complete spindle package by pre-programming your VFD, providing cable harness assemblies and tooling specific to your application. For your next project call **704.922.1206**. For more information, visit our website: [www.pdscolombo.com](http://www.pdscolombo.com)



# PDS SPINDLES

## High-Performance Spindles

PDS manufactures three main types of electric spindles; Manual Tool Change, Automatic Tool Change, and ATC Belt-Drive. These spindles are the perfect fit for a broad range of machine and robotic applications, including: grinding, deburring, milling, routing, trimming, polishing, and contour machining.

Through the use of modular design and size platforms, PDS is capable of configuring spindles to meet any customer need. This results in a broad range of spindle speeds, power, cooling methods and tool holding styles for a custom tailored solution.

## YASKAWA Spindle Drives

### Highlights

- High-performance variable frequency drive systems
- Simple keypad programming interface
- Models up to 2000 Hz for high-speed spindle control
- AC and DC drives for motors to 75 kW (100 hp)



## DynaLOC™ SERIES



- Speeds up to 40,000 rpm, power up to 20 kW (29 hp)
- Compact and light weight design
- Patented DynaLOC™ automatic tool retention system
- Plug-in style power and motor connections
- Choice of motor cooling: fan, compressed air or liquid
- Rotary encoder feedback, optional
- Motor temperature monitoring feedback, optional
- High spindle balance for low noise and long service life

## XLerator™ SERIES



- Speeds up to 40,000 rpm, power up to 16 kW (21.5 hp)
- Maintenance free HSK-style tool holder with quick-change push button release
- Plug-in style power and motor connections
- Rotary encoder feedback, optional
- Choice of motor cooling: fan, compressed air or liquid
- Motor temperature monitoring feedback, optional
- Also available in belt-driven models

## ADvantage™ SERIES



- Speeds up to 24,000 rpm, power up to 5.6 kW (7.5 hp)
- Manual collet ER25 tool retention
- Compact and light weight design
- Plug-in style power and motor connections
- Choice of motor cooling: electric fan or compressed air
- High-accuracy dynamic balancing, maximum stiffness
- High spindle balance for low noise and long service life

# INNOVATION

Visit our website: [www.pdscolumbo.com](http://www.pdscolumbo.com)

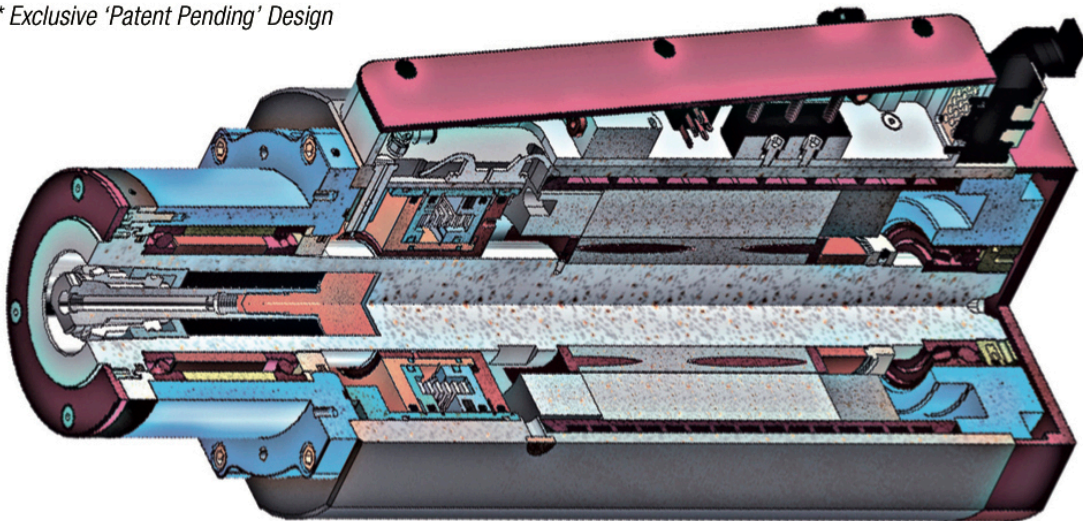
## ***Award Winning DynaLOC™ Tool Clamping System for Precision Machine Spindles***

### **Design Highlights**

- The patent pending DynaLOC is a compact tool clamping system that has fewer parts and requires less maintenance
- The DynaLOC system is integrated into the front of the spindle and is far more accessible than conventional drawbar designs
- DynaLOC design reduces the overall length of the spindle, increasing stiffness, making it more desirable for compact machine designs and robotic applications
- DynaLOC improves spindle performance allowing enhanced spindle balance and rigidity when compared to traditional ATC spindle designs



*\* Exclusive 'Patent Pending' Design*



# Precision Dynamic Spindles and Repair Services for Machines and Robots

**SPINDLE REPAIR EXPERIENCE**



- AXA
- AXIOME
- BABRIANI
- BALESTRINI
- BELOTTI
- BAVELLONI
- BERMAQ
- BETH
- BIESSE
- BIMA
- BJM
- BRE.MA
- BRETON
- BRYANT
- BUTH
- BZT
- CELASSCHI
- CMS
- CNC-STEP
- COEES
- COLONIAL
- COMAC
- COSMEC
- DATRON
- DIBOLD
- DYNOMAX
- DUBUS
- ECKSTROM-CARLOS
- EIMA
- EMOD
- ESSETRE
- EXCELLO
- FADAL
- FELDER
- ELTE
- FILL
- FIMEC
- FISHER
- FM EUROSPINDLE
- FOOKE
- GALLTECH
- GAMFIOR
- G. COLOMBO
- GEISS
- GILMAN
- GMN
- GROSITE
- HAAS
- HEALD
- HEIAN
- HENDRICK
- HG GRIMME
- HOLZ-HER
- HOMAG
- HSD
- HUFFMAN
- HUNDEGGER
- HURIO
- IBAG
- IMA
- IMES-CORE
- INTERMAC
- ISEL
- JAGER
- KESSLER
- KIMLA
- KOCH
- MKM
- MMB
- MORBIDELLI
- NSK
- OMLAT
- PARK
- PARKER
- PARKER MAJESTIC
- PERSKE
- POPE
- PRECISE
- RECKERTH
- RED HEAD
- REICHENBACHE
- SCM
- SCHWABEDISSEN
- SERON
- SETCO
- SHODA
- SIEMENS
- SKF
- SMZ
- TNB
- TRIMA
- UNIQUE
- VOORMAN
- WEEKE
- WEINIG
- WESTPHAL
- WETHOG
- WHITNON
- WISSNER
- YCM
- UMBRA
- and MORE!



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