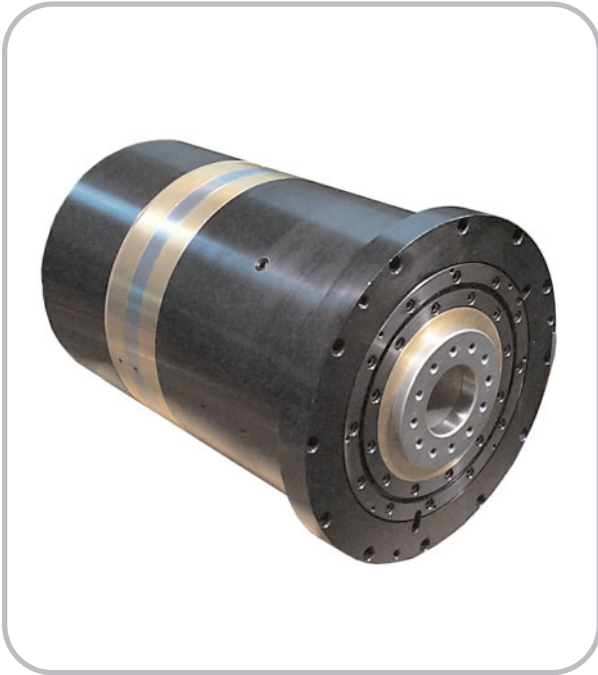


# WHS-180 Work Holding Spindle

## Ultra-Precision Air Bearing High Speed Spindles



*Face flange mount option*

ABTech, Inc's **WHS-180** air bearing work holding spindles provide the ultimate performance utilizing a low air supply. Standard filtered shop air can be used without sacrificing performance. High stiffness, load capacities and very low error motion make these spindles ideal for precision machining applications requiring ultra-smooth motion, high accuracy and speeds to 5000 rpm.

The spindles feature high torque DC brushless motors and rotary encoders. The motors are internally air cooled using the air bearings own exhaust air. Liquid cooling options are readily adapted to the existing ported housing.

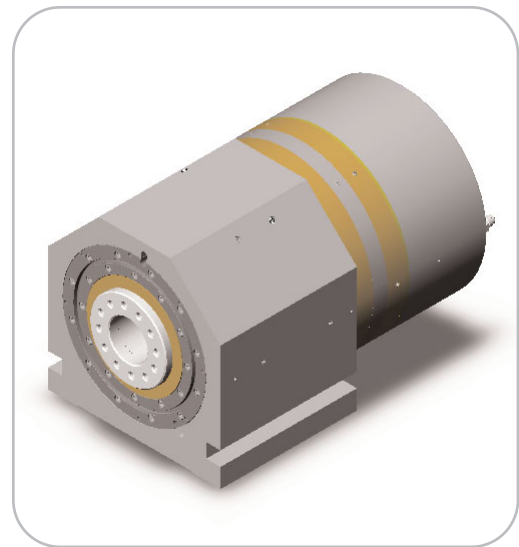
The durable 440C stainless steel shaft and bearing bronze journal make this spindle a rugged choice for very demanding machining applications.

ABTech's modular design approach allows for customization of mounting, thrust plate location and drives as customer applications require.

The **WHS-180** spindles are ideally suited for precision machine tools, work holding heads, flycutter heads and grinders. Applications include single point diamond turning, or glass optic grinding.

## Features

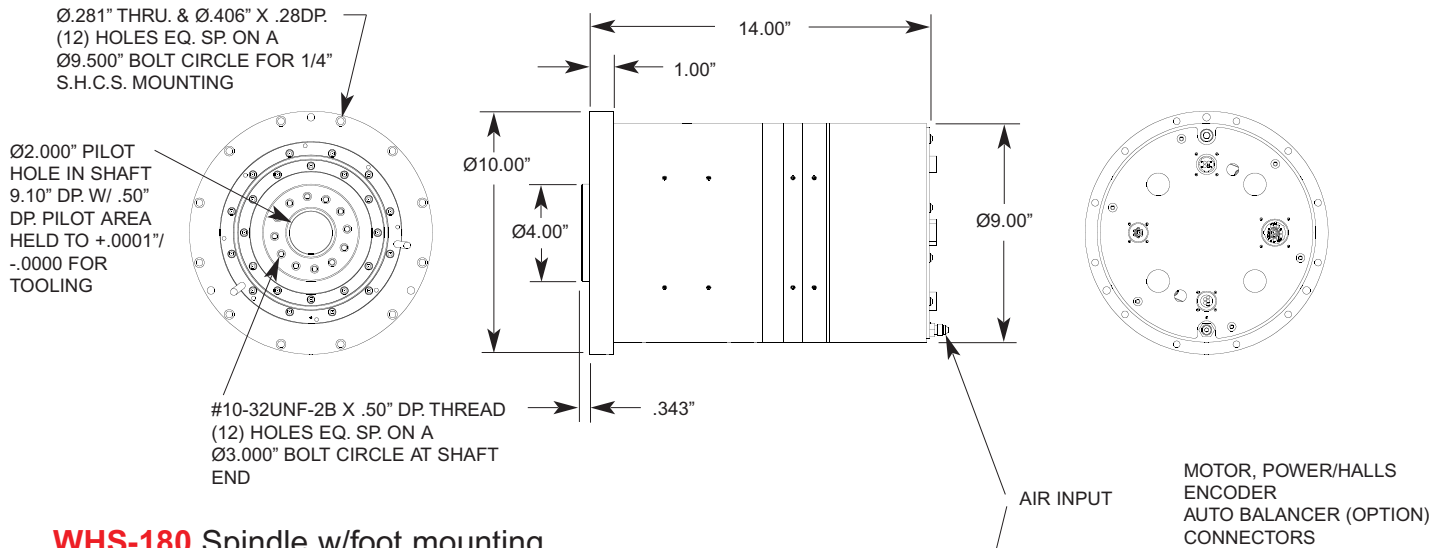
- "zero" static friction
- Speeds up to 5000 RPM
- Ultra-smooth motion
- High load capacity and stiffness
- Durable 440C Stainless steel shaft
- Bronze journal design
- Non-contact drive
- High torque brushless DC motors
- Rotary optical encoder
- Integral air cooling
- Vacuum feed through porting
- Low air consumption
- Modular design - easy customization



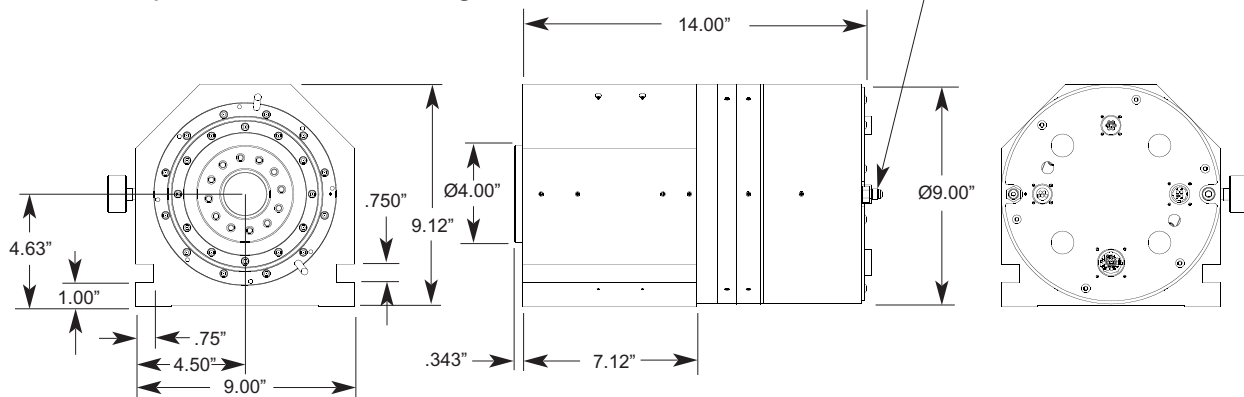
*Foot mount option*

# Specifications

## WHS-180 Spindle w/face flange mounting



## WHS-180 Spindle w/foot mounting



## Specifications

Radial Error Motion: *	±1.0μ" (±0.025μm)
Radial Asynchronous Error:	0.5μ" (0.013μm)
Axial Error Motion: *	±1.0μ"
(±0.025μm)	
Axial Asynchronous Error:	0.5μ" (0.013μm)

Radial load Capacity:	200lbs (90Kg)
Radial Stiffness:	0.8lbs/μ" (140N/μm)
Axial Load Capacity:	200lbs (90Kg)
Axial Stiffness:	1.0lbs/μ" (190N/μm)

Speed: 0 - 5000rpm

Operating air pressure: 80psi (5.52bar)  
Air consumption: 1.5scfm (2.6m3/h)

## Accessories / Options

- Flange, foot or A-Thermal mounting
- Vacuum chucks
- Vacuum pressure gauge
- Precision collet tooling
- Flycutter heads
- Liquid cooling
- Baladyne EM-2000 balancer unit
- PWM or Linear amplifiers
- Motion controllers
- Granite surface plate bases
- Vibration isolated base frames
- Air bearing or hydrostatic (Oil film) bearing
- Linear slide assemblies

\* - Measurements taken at 6 rpm Consult ABTech for motor/encoder information. All specifications are subject to change without notice.

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Pride In Precision

On Line: [www.abtechmfg.com](http://www.abtechmfg.com)