

Installation Requirements

INCORRECT INSTALLATION AND OPERATION MAY INVALIDATE SPINDLE WARRANTY

Description	Specification	Comments
Air Compressor:	Rotary Screw type, oil free	Service annually
Air Quality:	<0.1 PPM contamination (99.5%)	
Air Regulator:	3 stage SMC pressure regulator set AW30-F03D	
Air Filters:	AF30P-060S (5 Micron) AFM30P-060AS (0.3 Micron) AFD30P-F03D (0.01 Micron)	See filter inspection note below. Mist separator Micro mist separator
Air Pressure:	Min 5 Bar (75 PSI) Nom. 5.5 Bar (80 PSI) Max 6.0 Bar (90 PSI)	Protect spindle with pressure switch operating at 5 Bar (75 PSI)
Air Reservoir:	10 Litre (Near to equipment)	Prevents spindle failure due to sudden air loss
Air Humidity:	Air dew point ≤ 15°C	Use dessicant based air dryer, for lowest dewpoint
Room Temp:	21-23°C	To maintain spindle thermal stability
Coolant Water: (Motor & Body)	21-23°C temp controlled (as room temp)	Spindle cooled with recirculating water to ensure thermal stability and performance to spec.
Cutting Water: (if applicable)	+2°C higher than room temperature	To avoid internal spindle condensation
Spindle Clamping:	Do not distort spindle body during clamping	Consult website for more information.
Spindle Connectors:	Do not use PTFE tape on air fittings Do not obstruct air exhaust	PTFE tape can get inside the air spindle & cause seizure Check spindle drawing for location of exhausts Pipe exhaust away where necessary
Spindle Cleaning:	Always clean work area of spindle before machinery shutdown.	Keep air supply on during cleaning If work area is very dirty, leave air on 24 hours per day. This avoids contaminants entering spindles.
DO NOT FLUSH SPINDLES WITH ALCOHOL BASED SOLUTIONS		
Air Filter Inspection:	Monthly	Signs of oil or water, shut down machinery and investigate cause. Replace filters and air pipes with new prior to running equipment.
Carbon Brushes:	If applicable	Do not keep constant current through brushes. Pulse current during setup only.
Balancing:	Rotating parts balance to G0.4 (1/1000 gcm).	Use Loadpoint approved balanced parts only.
Spindle Handling:		Do not drop or apply shock loads to the spindle.
Useful Links:		
Clamping:	http://www.loadpoint.co.uk/how-air-bearings-work	
Air Quality:	http://www.loadpoint.co.uk/how-air-bearings-work	
Water Cooling:	http://www.loadpoint.co.uk/how-air-bearings-work	
Air Filters:	https://www.smcusa.com/products/airline-equipment/filters~15732	