



**air turbine spindles®**

for

**DMG MORI**

**25,000 – 90,000 rpm – power to 1.04 kW (1.4 hp)  
Constant Governed High Speed and Torque**

**Now your DMG MORI CNC delivers faster production 24/7**



**602(X)CAT40**  
0.11 - 0.34 kW  
0.15 - 0.45 hp

**625(X)CAT40**  
0.30 - 0.67 kW  
0.40 - 0.90 hp

**650(X)CAT40**  
0.57 - 1.04 kW  
0.76 - 1.40 hp

*With patented governed high speed and torque Air Turbine Spindles®, your DMG MORI Machine is a high speed machine!*

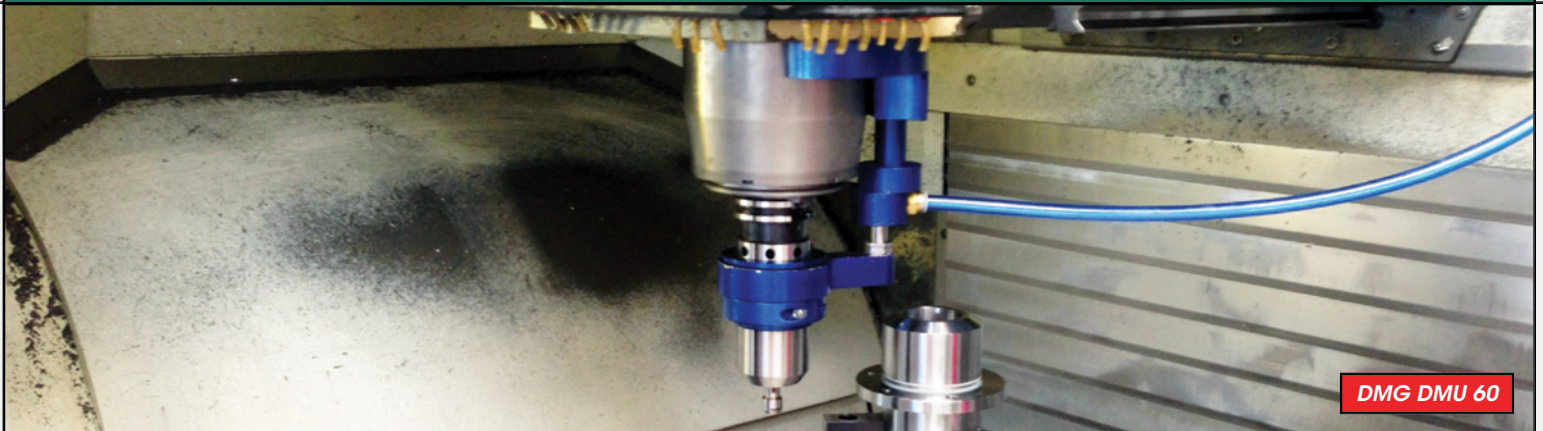
*No Duty Cycle*

*Call for a Demonstration*

*Fully automated loading:  
With our patent pending  
Toolchanger Mounting  
Assembly (TMA)*

*CAT, BT, DIN, HSK available  
Manual Connection also Possible*

**Manual or Automatic Loading to Save Time and Money.**



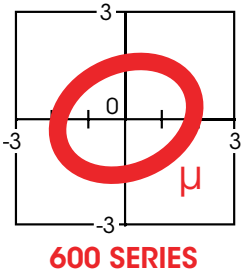
**Dramatically reduce your cycle times, optimize cutting tool performance and life.**

**Keep continuous tool path engagement on your existing CNC at high speed even in angles and hard material. Ideal for micro machining. 25,000 - 90,000 rpm < 1 kW (1.4 hp)**

## Accuracy

Most of the problems that occur in micro machining come from a lack of RPM and poor dynamic runout. **Air Turbine Spindles®** use the highest quality runout and balancing systems on the market today. This creates the best dynamic runout accuracy and governed high speed precision.

**Runout measured at the nose of spindle. (reference value)**



Improved Machining Cycle Times

Longer Tool Life

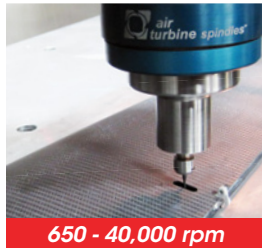
Better Surface Finish

Automatic Loading

## Super Low Vibration Design

Powerful, totally oil-free low friction motor produces extremely low vibration and heat in continuous 24/7 operation. No thermal expansion, great reliability.

**Standard ER 8 or ER 11 collets. Ultra precision option available.**



## Environmentally Clean

No oil required, and maintenance free.

**Air Pressure: Dry, Clean Air @ 90 psi / 6.2 bar**

**Air Consumption (Idle):** 602: 5 cfm / 2.4 L/s  
625: 11 cfm / 5.2 L/s  
650: 14 cfm / 6.6 L/s

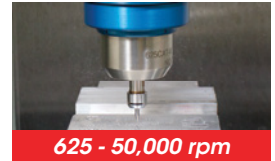
**Low Noise Design:** Under 67 dBA (cutting noise of endmills can be heard).

**Standard Equipment:** Filter Extractor

## Automatic Toolchanger

No need for operator downtime.

Automatically load **Air Turbine Spindles®** with our wrap around Toolchanger Mounting Assembly.



## Superior Technology

- Unique patented direct drive with no vanes, gears or brushes to wear, burn or break.
- Cooled by turbine air for 24/7 operation. No oil or control system required. No Duty Cycle.
- Governor keeps Constant High Speed + Torque on tool path in angles and corners.

## Spindle Selection

√ = Optimum

! = Dependent upon cutting conditions

∞ = Acceptable

x = Not recommended for use

		602(X)	625(X)	650(X)
Drill	Ø 0.1 - 0.3mm	√	√	√
	Ø 0.3 - 0.5mm	∞	√	√
	Ø 0.5 - 1.0mm	!	√	√
	Ø 1.0 - 1.5mm	x	∞	√
	Ø 1.5 - 2.0mm	x	!	√
Endmill	Ø 0.1 - 1.0mm	√	√	√
	Ø 1.0 - 2.0mm	√	√	√
	Ø 2.0 - 3.5mm	!	√	√
	Ø 3.5 - 5.0mm	x	∞	√
	Ø 5.0 - 6.0mm	x	!	∞
Jig Grinding		x	!	√
Specifications	602(X)	625(X)	650(X)	
Speed (rpm)	40,000		25,000	
	50,000	30,000	30,000	
	65,000	40,000	40,000	
	90,000*	50,000		
Power (kW)	0.11 - 0.34	0.30 - 0.67	0.57 - 1.04	
T.I.R. at Nose	Less than 1µm			
Collet Range	1mm - 6mm			
Air Pressure	Less than 0.62 MPa (6.2 Bar)			
Air Flow	126 - 1133 L/min [ANR] (6 - 40 cfm)			

\*Due to its governed high speed and power the 602 90,000 rpm is for use only with micro end mills in special applications.