



**air
turbine spindles®**

for



DN SOLUTIONS

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

Now your DN Solutions CNC delivers faster production 24/7



602CAT40
0.15 - 0.2 HP
0.11 - 0.15 kW



625(X)CAT40
0.4 - 0.76 HP
0.3 - 0.57 kW



650(X)CAT40
0.8 - 1.4 HP
0.6 - 1.04 kW

*With patented governed
high speed and torque
Air Turbine Spindles®,
your DN Solutions machine
is a high speed machine!*

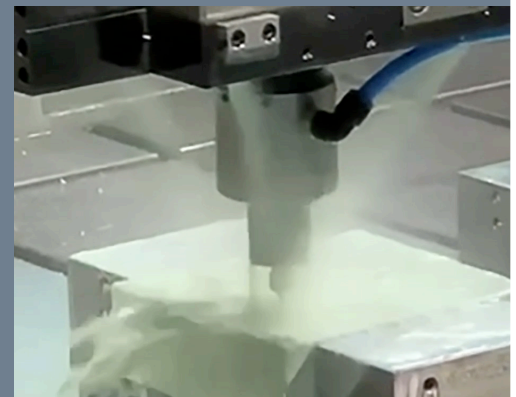
No Duty Cycle

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





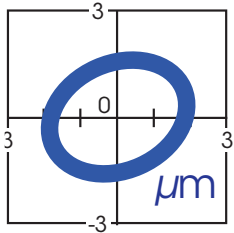
*Dramatically reduce your cycle times,
optimize cutting tool performance and life.*

*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 < 1.4 HP (1.04 kW)*

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)**



600 SERIES

Improved machining cycle times.

Better surface finish.

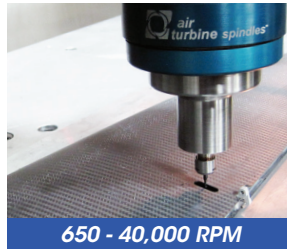
Longer tool life.

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.

**Ultra Precision ER 8 or ER 11
collets standard.**



650 - 40,000 RPM

Environmentally Clean

No oil required, and maintenance free.

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

Air Consumption (Working):

602(X): 5 - 6 CFM (2.36 - 3.3 L/s)

625(X): 11 - 30 CFM (5.2 - 14.16 L/s)

650(X): 14 - 40 CFM (6.60 - 18.99 L/s)

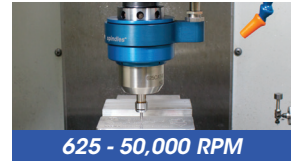
Low Noise Design: Under 67 dBA (cutting noise of endmills can be heard).

Standard Equipment: 0.3µm High Flow Filter/Extractor

Automatic Toolchanger

No need for operator downtime.

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



625 - 50,000 RPM

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
∞ = Acceptable

! = Dependent upon cutting conditions
x = Not recommended for use

		602	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	625(X)	650(X)
Speed (RPM)		40,000, 50,000, 65,000, 90,000*	30,000, 40,000, 50,000	25,000, 30,000, 40,000
Power (HP)		0.15 - 0.2	0.4 - 0.76	0.8 - 1.4
T.I.R. at Nose		Less than 1µm		
Collet Range		1 mm - 6 mm		
Air Pressure		Less than 6.2 Bar (0.62 MPa)		
Air Flow		5 - 40 CFM (2.36 - 18.89 L/s) [ANR]		



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

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