air turbine spindles® for HURCO®

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

Now your Hurco VM/VMX CNC delivers faster production 24/7

602(X)CAT40
65,000 rpm
0.15 - 0.45 hp
(0.11 - 0.34 kW)

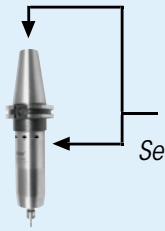
625(X)CAT40
50,000 rpm
0.40 - 0.90 hp
(0.30 - 0.67 kW)

650(X)CAT40
40,000 rpm
0.76 - 1.40 hp
(0.57 - 1.04 kW)

With patented governed high speed and torque Air Turbine Spindles®, your Hurco VM/VMX Machine is a high speed machine!

No Duty Cycle

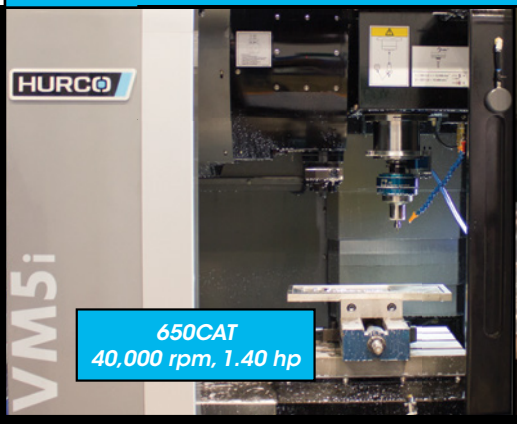
Direct Drive Reliability



Rear or Side Air Inlet

Selectable Mounting Options

Manual or Automatic Loading to Save Time and Money



For a Demonstration Contact:

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air turbine spindles®

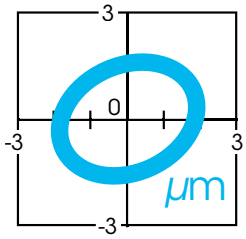
Dramatically reduce your cycle times, optimize cutting tool performance and life.

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 < 1.40 hp (1.04 kW)

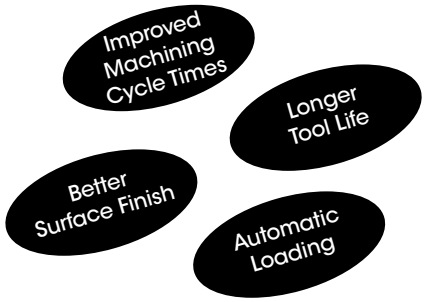
Accuracy

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. (refrence value)



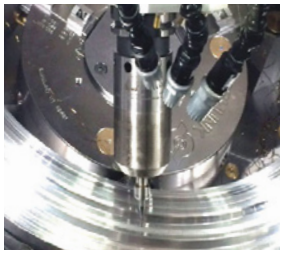
600 SERIES



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.



Environmentally Clean

No oil required, and maintenance free.

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

Air Consumption (Working):
602(X): 5 - 10 cfm (2.36 - 4.27 L/s)
625(X): 11 - 30 cfm (5.20 - 14.16 L/s)
650(X): 14 - 40 cfm (6.60 - 18.99 L/s)

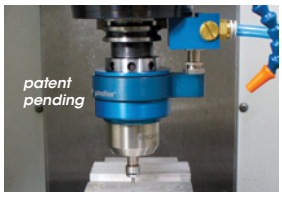
Low Noise Design: Under 67 dBA (cutting noise of endmills can be heard).

Standard Equipment: 0.3µm High Flow Filter/Extractor

Automatic Loading

No need for operator downtime.

Automatically load *Air Turbine Spindles®* with our **Toolchanger Mounting Assembly** or use rear center airfeed.



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.
- Saves wear on main spindle.

Spindle Selection

√ = Optimum **! = Dependent upon cutting conditions**
∞ = Acceptable **× = 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	×	∞	√
	Ø 1.5 - 2.0mm	×	!	√
Endmill	Ø 0.1 - 1.0mm	√	√	√
	Ø 1.0 - 2.0mm	√	√	√
	Ø 2.0 - 3.5mm	!	√	√
	Ø 3.5 - 5.0mm	×	∞	√
	Ø 5.0 - 6.0mm	×	!	∞
Jig Grinding		×	!	√

Specifications	602(X)	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 - 0.45	0.40 - 0.90	0.76 - 1.40
T.I.R. at Nose	Less than 2µm		
Collet Range	1mm - 6mm		
Air Pressure	Less than 6.2 Bar (0.62 MPa)		
Air Flow	5 - 40 CFM (2.36 - 18.89 L/s) [ANR]		

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**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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