

25,000 – 90,000 RPM – Power To 1.4 HP (1.04 kW)
Constant Governed High Speed and Torque

The New High Speed Option With Air Turbine Spindles®



601 Series
40,000 - 90,000 RPM
Power to 0.2 HP (0.15 kW)

Spindle airfeed from rear or side NPT.



625(X) Series
30,000 - 65,000 RPM
Power to 0.76 HP (0.57 kW)



650(X) Series
25,000 - 40,000 RPM
Power to 1.4 HP (1.04 kW)

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

No duty cycle.

Fully automated loading:

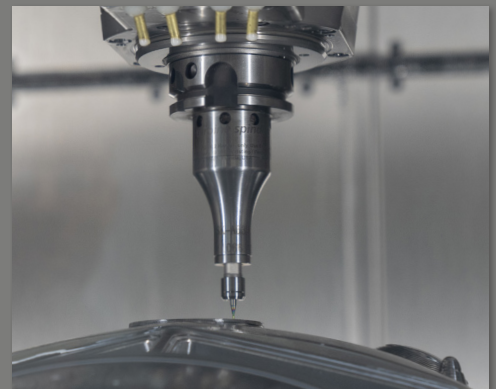
1. With our patented Toolchanger Mounting Assembly (TMA) or
2. Power spindle with through spindle air option.

Manual connection also possible.

Call for a demonstration!

+1 561-994-0500

Manual Or Automatic Loading To Save Time And Money





Dramatically Reduce Your Cycle Times While Optimizing 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.

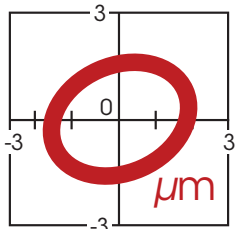
25,000 - 90,000 RPM < 1.4 HP (1.04 kW)

Accuracy - 2μ Certified

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

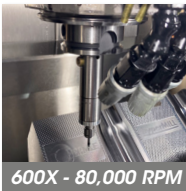
Better Surface Finish

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.



600X - 80,000 RPM

Ultra Precision ER 8 or ER 11 collets standard.

Environmentally Clean

No oil required, and maintenance free.

Air Pressure:

Dry, clean air at 90 psi (6.2 bar).

Air Consumption (Working):

601: 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 (6.61 - 18.89 L/s)

Low Noise Design:

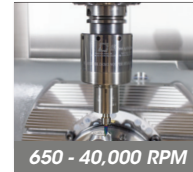
Under 78 dBA (cutting noise of endmills can be heard).

Standard Equipment:

0.3μm high flow filter/extractor.

Automatic Toolchange Options

No need for operator downtime. Automatically load Air Turbine Spindles® using center airfeed.



650 - 40,000 RPM



625 - 65,000 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.
- ▶ Center airfeed using coolant channel or side airfeed.

Spindle Selection Guide

✓ = Optimum

∞ = Acceptable

! = Dependent upon cutting conditions

x = Not recommended for use

| Cutting Tool | | 601 | 625(X) | 650(X) |
|----------------|----------------|------------------------------------|------------|-----------|
| Drill | Ø 0.1 - 0.3 mm | ✓ | ✓ | ✓ |
| | Ø 0.3 - 0.5 mm | ∞ | ✓ | ✓ |
| | Ø 0.5 - 1.0 mm | ! | ✓ | ✓ |
| | Ø 1.0 - 1.5 mm | x | ∞ | ✓ |
| | Ø 1.5 - 2.0 mm | x | ! | ✓ |
| Endmill | Ø 0.1 - 1.0 mm | ✓ | ✓ | ✓ |
| | Ø 1.0 - 2.0 mm | ✓ | ✓ | ✓ |
| | Ø 2.0 - 3.5 mm | ! | ✓ | ✓ |
| | Ø 3.5 - 5.0 mm | x | ∞ | ✓ |
| | Ø 5.0 - 6.0 mm | x | ! | ∞ |
| Jig Grinding | | x | ! | ✓ |
| Specifications | | 601 | 625(X) | 650(X) |
| Speed (RPM) | 40,000 | | 30,000 | 25,000 |
| | 50,000 | | 40,000 | 30,000 |
| | 65,000 | | 50,000 | 40,000 |
| | 90,000* | | 65,000 | |
| | | | | |
| Power (HP) | | 0.15 - 0.2 | 0.4 - 0.76 | 0.8 - 1.4 |
| T.I.R. at Nose | | Less than 2μm | | |
| Collet Range | | 0.5 mm - 7 mm | | |
| Air Pressure | | 90 psi/6.2 bar (0.62 MPa) | | |
| Air Flow | | 7 - 23 CFM (3.3 - 10.85 L/s) [ANR] | | |



*Due to its governed high speed and power the 601 90,000 RPM is for use only with micro end mills in special applications.