

5.10 Comparison deburring spindle engraflexx ESP-AP

	engraflexx ESP (electrical high frequency spindle)	engraflexx AP (compressed air spindle)
Spindle speed	Freely selectable (approx. 1,000-24,000 rpm)	Fixed speed (no load approx. 30,000 rpm, load approx. 26,000 rpm)
Speed stability	Absolutely guaranteed (controlled via frequency converter)	May vary (pressure and load dependent)
Noise level (distance to spindle approx.3m)	40-72db (speed dependent) Guide values: 60db (12,000 rpm); 72db (24,000 rpm)	64db (26,000 rpm)
max. lateral deflection	10 mm	15 mm
lateral deflection force	infinitely adjustable (mechanically or pneumatically)	infinitely adjustable (mechanically)
Deflection behaviour	neutral (spindle weight is precisely balanced)	Spindle somewhat top-heavy (relevant for horizontal mounting)
Deflection limit	Blocking one or both deflection planes possible	Possible to a limited extent
Monitoring functions	diverse (via frequency converter)	none
Energy supply	Required upstream of frequency converter	Directly on compressed air line (oiled compressed air)
Energy consumption	negligible	relatively high
Maintenance costs	no periodic maintenance required	periodic maintenance required (after several thousand operating hours)
Sensitivity to dirt	Enclosed aluminium housing, electrical protection in accordance with IP54	Enclosed aluminium housing
Spindle fastening	Threaded holes	Clamp fastening
Output	0.35 kW	0.28 kW
Weight	approx. 5 kg	approx. 2 kg
Tool mount	Collet chuck (div. sizes to max.d8)	Collet chuck (div. sizes to max.d8)