



Summary Overview

- 0 = can work
- ✓ = good fit
- ✓✓ = best fit

		Sensors type				
		Electrical Power	Acoustic Emission	Vibration	Force	Strain
Machining Processes	Turning	✓✓	✓✓	0	✓✓	✓
	Grinding	0	✓✓	✓	✓	✓
	Drilling	✓✓	✓✓	0	0	0
	Stamping		✓		✓✓	✓✓
	Die-casting		✓✓	✓✓	✓	✓
	Rotary-cycle machine	✓	✓✓	✓	0	0
	Multi-spindle lathe		✓✓	✓	✓✓	✓✓
	Machining center	✓	✓	0	✓	0
Detection capability	Missing tool	✓✓	✓✓	✓✓	✓✓	✓✓
	Tool fracture	✓	✓✓	✓	✓✓	✓✓
	Tool wear	✓✓	✓	✓	✓✓	✓
	Chatter	0	✓✓	0	0	0
	Collision	✓	✓✓	✓✓	✓	✓
	Contact	0	✓✓	✓✓	✓	✓
Optimisation	Tool life	✓✓	✓	0	✓	✓
	Quality	✓	✓	0	✓	0
	Process	✓	0	✓	✓	✓
	Reduction of air grinding	0	✓✓	✓✓	0	0

Notes:

Electrical Power: Electrical power sensors use the clear relationship that exists between the power load requirement and amount of metal machining that is taking place to monitor the process. Reduction gears can influence the clarity of the signal level.

Acoustic Emission: The measurement is more sensitive the closer the sensor is installed to the processing point. Joining areas (such as screw connections) between the processing point and the sensor reduce the acoustic signals.

Vibration: Comparable to acoustic emissions (low frequency range)

Force / Strain: Forces and strain within machine components are dependent on the structure of the machine and should be interpreted separately in each case.