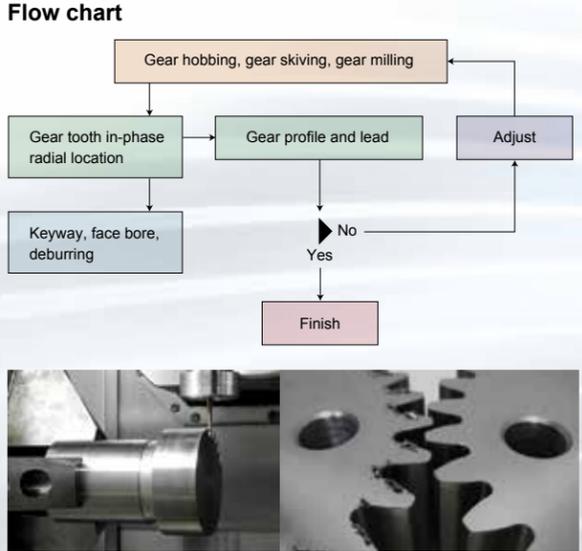


Measurement



Gear tooth radial in-phase location PATENT PENDING

After using a new or reground tool, a gear tooth can be probed by a touch sensor to determine the required amount of compensation. This same process can also be used to determine the in-phase positioning of other machined features, such as deburring using a ball nose end mill or locating a bore on a workpiece face. Accuracy of the in-phase positioning is ± 0.005 degrees (16 µm (0.00063" on a 360 mm (14.17") diameter).



Gear profile and face measurement OPTION

The gear profile and gear face are inspected by a scanning probe after machining in the same workpiece setup. Conventionally, gears are machined on special-purpose gear-cutting machinery and then transferred to measurement equipment in another location. For large gears, considerable time is required to transfer them to the measurement area, mount them on the measurement equipment and then set up the measurement equipment. This is eliminated by the optional gear profile and gear lead measurement software.

Gear face measurement by scanning probe



Measurement results are displayed on the MAZATROL SmoothX CNC display

Measurement results shown on the CNC display can be output as a PNG file by pressing a single key.



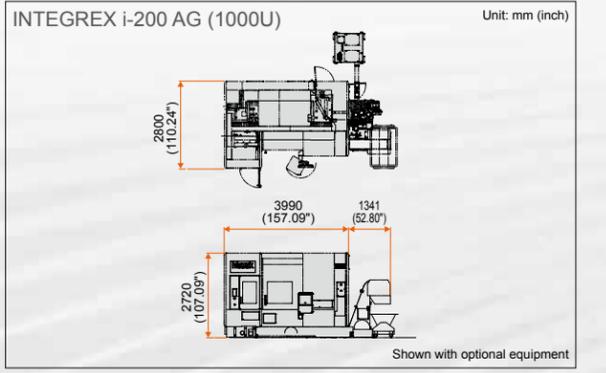
Gear cutting & measurement

☐: Included - / N / A

		External gears			Internal gears		
		Spur gears	Helical gears	Involute spline gears	Spur gears	Helical gears	Involute spline gears
Gear cutting	SMOOTH GEAR SKIVING	○	○	○	○	○	○
	SMOOTH GEAR HOBBIING	○	○	○	-	-	-
	SMOOTH GEAR MILLING	○	○	-	-	-	-
Deburring		○	○	-	○	○	-
SMOOTH GEAR CHECK	Gear tooth radial in-phase location	○	○	○	○	○	○
	Gear profile and gear lead measurement	○	○	○	○	-	○

Standard machine specifications & machine dimensions

INTEGREX i-200ST AG	
Max. workpiece dimensions	ø658 mm × 1519 mm (ø25.91" × 59.80")
X-axis travel	615 mm (24.12")
Y-axis travel	260 mm (10.24")
Z-axis travel	1585 mm (62.40")
B-axis travel	-30°~ 210°
X2-axis travel (lower turret)	230 mm (9.06")
Z2-axis travel (lower turret)	1388 mm (54.65")
Main spindle (40% ED (30-min. rating)	5000 min ⁻¹ (rpm), 22 kW (30 HP)
Second spindle (40% ED (30-min. rating)	5000 min ⁻¹ (rpm), 18.5 kW (25 HP)
Milling spindle (40% ED (30-min. rating)	12000 min ⁻¹ (rpm), 22 kW (30 HP)



INTEGREX e-1250V/8 AG	
Max. workpiece dimensions	ø1450 mm × 1600 mm (ø57.09" × 62.99")
X-axis travel	1875 mm (73.82")
Y-axis travel	1250 mm (49.21")
Z-axis travel	1345 mm (52.95")
B-axis travel	150°
C-axis travel	360°
Milling spindle (40% ED (30-min. rating)	10000 min ⁻¹ (rpm), 37 kW (50 HP)
Turning spindle (cont. rating)	500 min ⁻¹ (rpm), 40 kW (53 HP)

