

High performance multi-surface grinders

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Multi-surface grinder

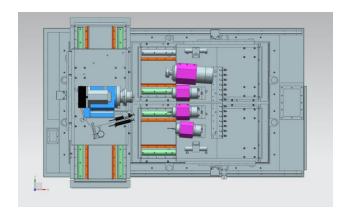
- Ultimate flexibility to grind several geometrically related features in a single chucking
- Ideal for bore, seat & face applications (fuel systems, valve train, bearing, turbochargers, etc.)
- Modular design for various machine configurations
- Dual-slide arrangement in Z-axis can accommodate up to 6 grinding spindles
- Spindle speeds up to 120,000 RPM
- Available configuration:
 - Chucker Shoe
 - Chucker

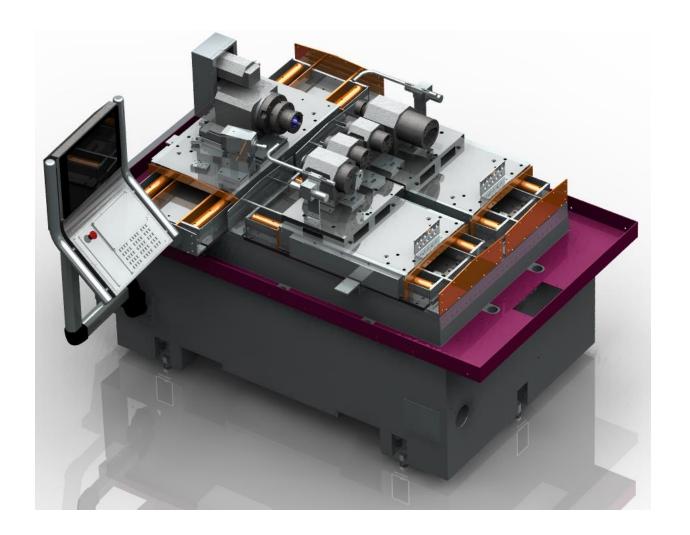




Slide Arrangement

- Up to 6 spindles on 2 slides
- Independent slides
- One or two workheads







Specifications

Grinding capacity		
Max. swing diameter	250 mm ⁽¹⁾ (9.8")	
Max. workpiece length	177 mm (7")	
Max. internal grinding diameter	228 mm (9")	
Max. internal grinding depth	88 mm (3.5")	
Spindles & workhead		
Max. number of spindles	4	
Max. ID spindle speed	120,000 rpm	
Max. workhead speed	3,000 rpm	

Axes & control		
Axis travel X	508 mm (20")	
Axis travel Z	2 x 254 mm ⁽²⁾ (0.08" x 10")	
Axis speed (X & Z)	24,000 mm/min (79 ft/min)	
Axis arrangement	Independent	
Control	Fanuc i series	
Dimensions		
Dimensions (W x D x H)	2,440 x 1,520 x 2,110 mm (8' x 5' x 7')	
Machine weight	6,300 kg (13,889 lb)	

⁽¹⁾ The biggest possible part diameter can vary, depending on application and part geometry (2) Dual slide arrangement



Sample Applications

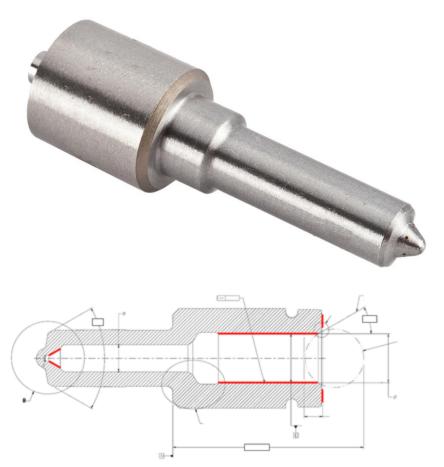








Injector Nozzle



Tolerances		
Bore	+/- 0.005 mm	
Bore run-out	0.0028 mm	
Bore roundness	0.0013 mm	
Bore finish	Ra 0.25	
Seat run-out (to bore)	0.005 mm	
Seat roundness	0.002 mm	
Seat angle (gage height diff.)	+/- 0.0023 mm	
Seat finish	Ra 0.3	
Face flatness	0.003 mm (convex)	
Face parallelism (to shoulder)	0.02 mm	
Cpk	> 1.67	