

Grinding Center

HS-195/196GC

MULTI-AXIS GRINDING CENTER



Are You Looking for a Better Solution
for Grinding Applications?



The Huffman HS-195/196GC Multi-Axis SuperAbrasive Grinding Center builds on its heritage of precision, reliability, versatility and productivity with the addition of an Automatic Tool Changer (ATC). The ATC enables flexible solutions for a wide variety of complex parts requiring multiple wheel packs or multiple machining processes including *grinding, milling, drilling and probing*.

The system is designed to meet the increasing demands for flexible, reliable, precision production systems for complex parts like flight and industrial gas *turbine blades, vanes, shrouds and seals, medical implants and instruments, and other components*.

Benefits:

- Multi-tasking production environment.
- *Reduced WIP, Higher Quality, Lower Total Throughput Time, and Lower Total Cost* by combining machining operations into a single machine cycle.
- *Maximum Precision and Rigidity and Minimized Vibration* with precision ground, preloaded ball-screws, preloaded linear guide-ways, and massively ribbed structural components.
- *Higher Quality Parts with a Better Finish* through Zero backlash geared rotary axes.
- The proven, reliable rotary dial ATC has a magazine that can store a combination of 18 tools/grinding wheels depending upon the tool/wheel diameters. The ATC is located so as not to encroach on the 16" XYZ work cube.
- A probe can be loaded in one tool packet, and used for pre-machine location verification or post-machine inspection.



[HS-195/196GC AT-A-GLANCE]

- ▼ Small Footprint (117 sq ft / 10.9sq m)
- ▼ Oil-based or Water-Soluble Coolant Capacity
- ▼ Shorter Setup & Cycle Times
- ▼ Available in 3, 4, 5 or 6 axis configurations
- ▼ Rigid Machine Design
- ▼ Equipped with a HSK-63, 20.1 HP (continuous duty), 0 to 8,000 RPM spindle and a GE Fanuc 160iM CNC control system, drives and servo motors
- ▼ Operational Simplicity

By using existing, proven machine modules, Huffman can deliver *exceptionally productive, customized manufacturing solutions* without the risk and long lead times associated with custom machines.



Compelling Productivity. Legendary Reliability.

Contact Us Today!

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HS-195/196GC

MULTI-AXIS
SUPERABRASIVE
GRINDING
CENTER

[TECHNICAL DATA]

	Axis Type	Total Travel (axes under CNC control)	Feed Rate
X-Axis	Linear	16" (406 mm)**	0-393 ipm (0-10 mpm)
Y-Axis	Linear	16" (406 mm)	0-393 ipm (0-10 mpm)
Z-Axis	Linear	16" (406 mm)	0-393 ipm (0-10 mpm)
A-Axis ¹	Rotary	360°	5.5 rpm
C-Axis	Rotary	+45° to -180°	5.5 rpm
B-Axis	Rotary	+15° to -105°	3.3 rpm

¹ Different A-Axis designs are available depending upon the grinding application which may change the quoted feedrate and accuracy.
** Full travel is 32" (813 mm) to accommodate the tool changer.

	Programming Resolution	Positioning Accuracy*	Positioning Repeatability*
Linear Axes (scale feedback)	0.0001" (0,001 mm)	±0.0001 in/ft (±0,008 mm/m)	0.0001 in/ft (0,008 mm/m)
Rotary Axes (motor feedback)	0.001°	±10 arc sec	10 arc sec

*With directly coupled linear/rotary encoder feedback

Wheel Spindle Range	0-8000 rpm‡	Total Weight	20000 lbs (9100 kg)
Wheel Diameter	4-10" (102-254 mm)	Overall Dimensions	156 x 108 x 110" (3962 x 2743 x 2794 mm)
Spindle Power	20.1 hp (7,46 kW)*	ATC Tool Capacity	18 (range from 9-18 depending on tool/wheel diameter)
		Spindle Interface	HSK-63

‡ Variable speed and higher power options are available

▼ [STANDARD EQUIPMENT]

- 9-pocket ATC
- HSK-63 coolant nozzle interface
- Stress-relieved cast iron machine base
- Digital AC brushless servo drive systems
- Motor encoders on all axes
- Single wheel hub
- Metric design & hardware
- Oil-based coolant compatibility

▼ [OPTIONAL EQUIPMENT]

Application Software Options

- Automotive, aerospace & energy components
- Medical components
- Cutting tools
- CAD/CAM compatibility with Huffman or 3rd party post-processors

Workholding Options

- EROWA, 3-R, modular fixturing system, HSK, CAT, collet, arbor-style tooling, tailstock with centers, steady-rests

Coolant System Options

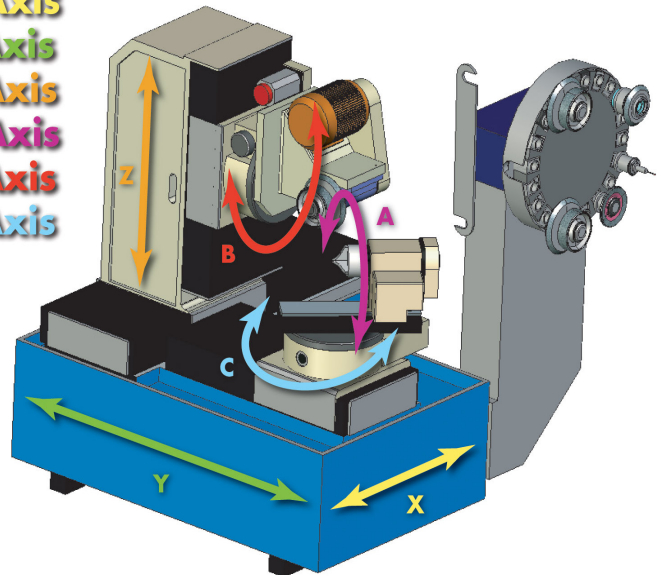
- 100-500 psi (7-35 bar)
- Water-soluble coolant capacity
- Paper, centrifuge, DE & other filtration
- Temperature-controlled
- Mist exhaust filtration
- Spray washdown system

Other

- Fewer or more than 5 axes available
- Integrated probing
- Rotary truing device

[HS-195/196GC AXIS CONFIGURATION]

X-Axis
Y-Axis
Z-Axis
A-Axis
B-Axis
C-Axis



6-axis configuration shown



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CORPORATE HEADQUARTERS

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