



HS650-200

B&K Fellows CNC Hydrostroke™ Gearless Gear Shaper

GEARLESS GEAR SHAPER

STANDARD MACHINE SPECIFICATIONS

The Bourn & Koch Fellows HS650-200 Hydrostroke™ is a six (6) axis CNC hydraulic stroking gear shaper with variable quick return stroking, direct drive spindles, electronic indexing, elevating cutter spindle housing, Fanuc 30iB CNC touch screen control, for shaping internal and external gears.



Technical Data - Capacities & Limits	
Nominal PD (external)	650 mm
Nominal PD (internal)	635 mm
Maximum Module	12.7 mod
Maximum Face Width	200 mm
Worktable Diameter	690 mm
Cutter Spindle Stroking Range	20-500 spm
Cutter Spindle Diameter	120 mm
Maximum Part Swing Diameter	1000 mm
Cutter spindle slide travel	300 mm
Height (Approximate)	3125 mm
Length (Approximate)	5334 mm
Weight (Approximate Net)	17195 kg

Technical details subject to change without notice.

		Max. (mm)	Min. (mm)
Nominal work diameter	∅	650	~
Center distance	X	584.2	-10
Maximum work swing diameter		1000	
Cutter spindle diameter (mm)		120	~
Face width range	V	200	0
Stroke length		250	0
Axial slide position (spindle face to table)	Z	758	203.2

Technical details subject to change without notice.
Submit drawings for workplace interference study.

Actual machine W-H-L and Weight depend on ordered configuration. Technical data is subject to change without notice and may vary according to the workpiece geometry, the loading system and the workholding equipment supplied.

∅ = Nominal Workpiece Diameter; X= Center Distance;
V= Face Width Range;
Z = Axial Cutter Slide Position Above Table Top



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Standard Equipment	
Description	
Base machine with GE Fanuc 30iB CNC control	
Hydrostatic spur guide	
Pendant mounted console, 15" color LCD touch screen	
GFI Duplex outlet (120 VAC)	
Manual pulse generator, inch/metric switchable	
Storage for approx. 100 part programs	
Diagnostics and error prevention	
Function controls and keypads for direct entry of gear shaping data	
Operator's menu with cutter configuration menu, part setup menu, on-line diagnostics, cycle counter, cycle timer	
6 axis control using AC Servo Direct Drives:	
Electronic index drive for synchronizing of cutter and work rotation	
Stroking speed	
Stroking position	
Work spindle rotation	
Cutter spindle rotation	
Infeed speed and position	
Stroke length	
Adaptive process control for optimizing chip load	
Automatic compensation of temperature dependent CD changes	
Servo stroke positioning of cutter spindle	
Selectable number of cuts	
Programmable, multi-surface cutting capability	
Programmable infeed and rotary feed	
Oriented Stiffness Back-Off™, servo driven for taper and crown	
Water cooled heat exchanger for direct drives (requires plant water)	
Hydraulic system, free standing 100 gal. HPU	
Lubrication system	
Coolant system, chip basket, optional chip conveyor	
Full machine enclosure	
Paint: Sherwin Williams Swiss Dotted Off-White	
Documentation	
Work lamp, high intensity	
Manufactured in USA	
Standard Equipment Total (\$):	

Optional Equipment	
Description	Price (\$)
Hydrostatic helical guide	
Electronic door open and close	
Quick change cutter mechanism	
Automatic hydraulic through hole fixture clamping unit	
Automatic tool change mechanism for storage of up to (8) tools	
Stand alone liquid chiller unit for cooling direct drives	
Hydraulic work clamp cylinder assembly	
48" discharge height magnetic chip conveyor (rear discharge)	
CNC controlled cutter offset	
Hydraulically operated, retractable tailstock	
Workholding fixturing	
Gear shaper cutters	
Training Programs	
CE certification for EU destinations	
Optional Equipment Total (\$):	

Total Cost:	
Standard Equipment Total (\$):	
Optional Equipment Total (\$):	
TOTAL (\$):	



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