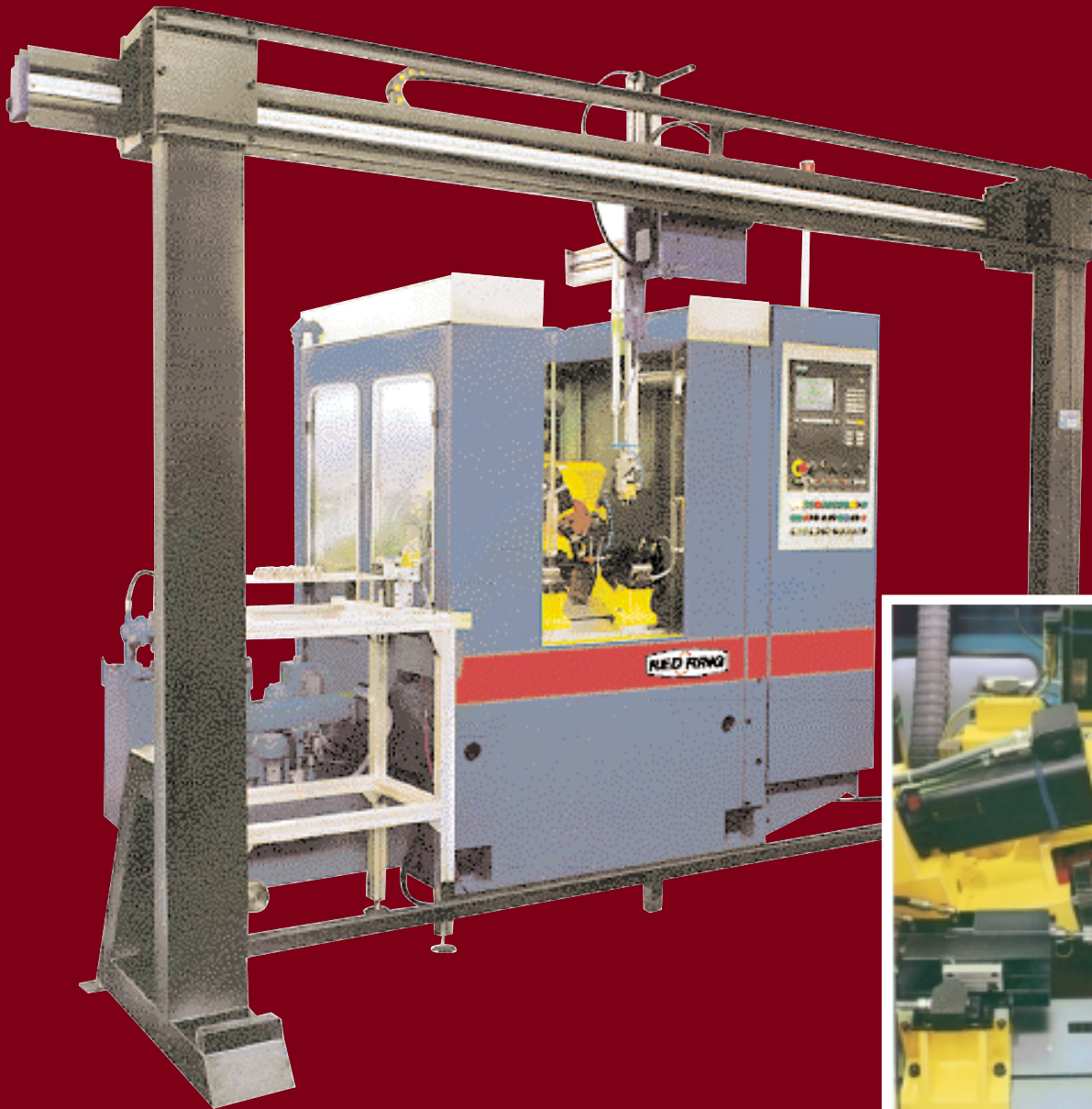


# SHAVEMASTER 200

THE LATEST ADVANCEMENT IN GEAR FINISHING



**NACHI**



NACHI MACHINING TECHNOLOGY CO.

# SHAVEMASTER 200

## THE LATEST ADVANCEMENT IN GEAR

◆ A C C U R A C Y ◆ P E R F O R M A N C E ◆

In recent years, the demand for quality in small gear manufacturing has increased due to ever tightening tolerances. The Shavemaster 200 contains the same technology as its bigger cousin, the 400, but is designed for the specific requirements of small gear shaving.

## The Structure

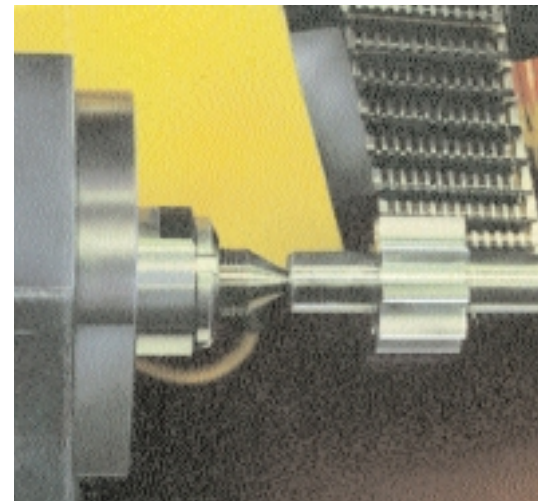
The Shavemaster 200 has an extremely compact structure and the slide for the radial approach shaving gear has a 30° slant, providing:

- Easy manual loading/unloading of the machine
- Minimal floor space requirements
- Perfect chip evacuation

## The Mechanics

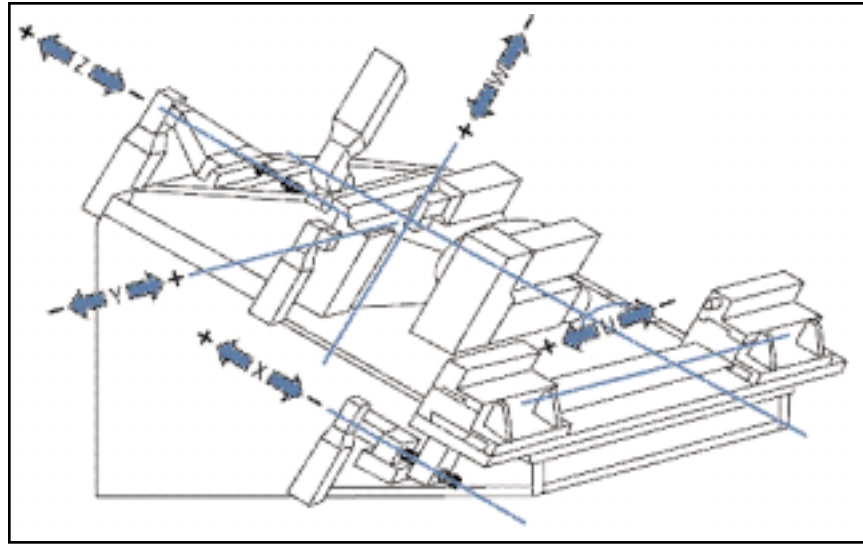
The Shavemaster 200 has been designed for simplification. The kinematic chain is reduced to a brushless motor, a motor reducer with encoder, and a ball screw. This allowed the designers to concentrate on:

- Easy Maintenance
- Accessibility
- Consistent Accuracy
- Diagonal Cycle Movement: obtained by two rectilinear movements –Axes W and Y.
- The crowning Axis X, in interpolation with the other axes, can produce Asymmetric Crownings, Inconsistent Radius Crownings, and Tapers With Differentiated Slant.



# FINISHING

RELIABILITY ◆



## Software— Machining Cycles

The programming software is very easy to use and helps avoid programming errors which could result in damage to the tools or the workpieces. CNC makes it possible to obtain some cycles that were previously unobtainable on traditional machines, such as the mixed cycle plunge & diagonal and special diagonal cycles.

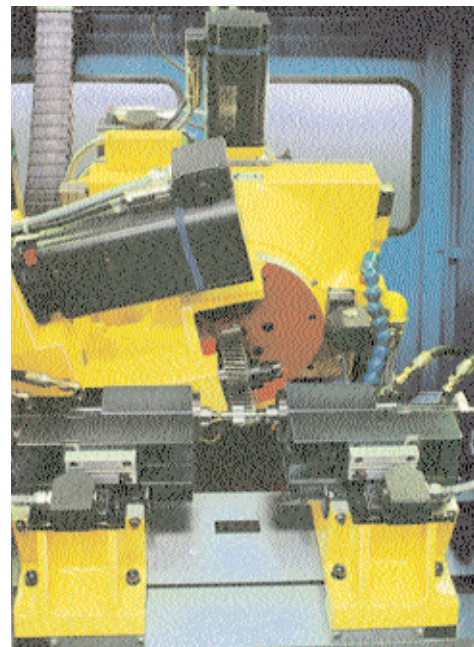
The following special software is available:

- Software for the calculation of theoretical values of Axes U and Z after cutter resharpening.
- Automatic diagnosis with a clear display of problems.
- Software that measures thermal expansions and

makes adjustments to cutterhead Axis Z. As a result, accuracy is not affected by ambient temperature variations or particular conditions of machine use.

## AUTOMATIC LOADERS/ UNLOADERS & SHAVING FLEXIBLE CELLS

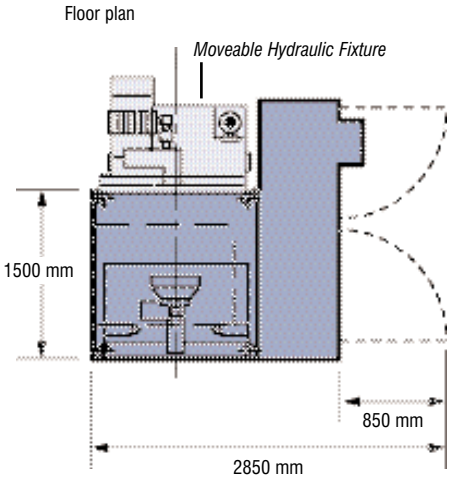
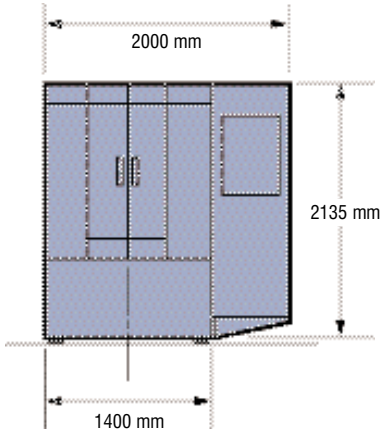
Nachi Machining Technology Co. is in the position to supply complete shaving flexible cells for unmanned machining, with workpiece pick-up from pallet storage, loading, unloading, and storage of the pieces.



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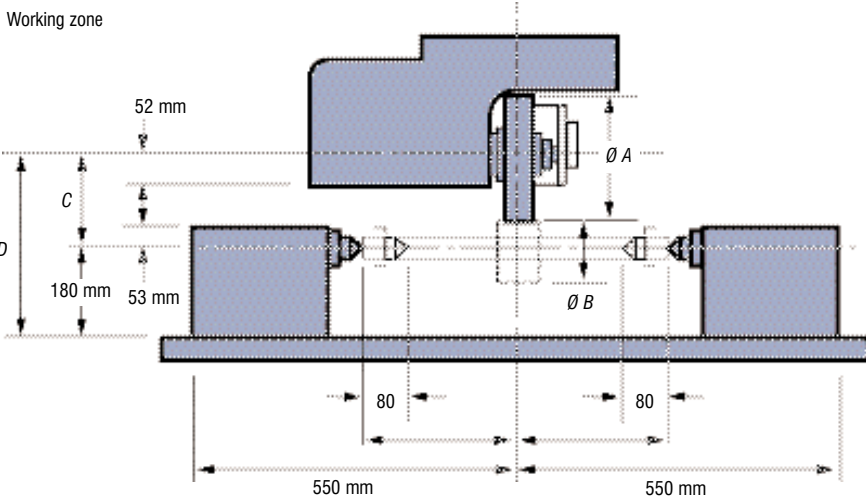


TECHNICAL DATA (WITHOUT LOADER) SHAVEMASTER 200		
Min./Max. Module	mm.	0.8-5.0
Min./Max. Distance between centers	mm.	108-200
Max. Diameter of shaving cutter	mm.	245
Shaving cutter bore diameter	mm.	63.5
Min./Max. shaving cutter width	mm.	19-50.8
Maximum face to be shaved	mm.	100
Shaving cutter RPM	r.p.m.	10-400
<b>AXIS Z</b>		
Reading	mm.	.001
Rapid positioning speed	mm./min.	166
Working speed in plunge	mm.	.16-4
Minimum feed	mm./min.	.01
Stroke	mm.	92
<b>AXIS X</b>		
Reading	mm.	.001
Speed	mm./min.	1-333
Stroke	Degr.	+/-1.7
<b>AXIS U</b>		
Reading	Degr.	.001
Speed	Degr./min.	500
Rotation	Degr.	-25+45
<b>AXIS Y</b>		
Reading	mm.	.001
Speed	mm./min.	1-333
Stroke	mm.	+/-30
<b>AXIS W</b>		
Reading	mm.	.001
Speed	mm./min.	1-333
Stroke	mm.	+/-10
Head Rotation Angle	Degr.	-25/+90
Table Oscillation	Degr.	+/-1.7
Installed power (without pump and cooling filter)	KVA ap.	11
Net Mass	Kg ap.	4000
Power circuits (Standard execution)	V Hz	440 60
Auxiliary Circuits (Standard execution)	V V Hz	24 D.C. 110 60



All limit values cannot be reached at the same time and under every condition. We are constantly working to improve our products. Therefore, we intend to continuously make technical modifications as necessary.

Ø A		Ø B	
"	mm	Ø Min	Ø Max
7	177.8	38.2	222.2
8	203.2	12.8	197.8
9	228.6	0	171.4
	245	0	155



	Min	Max
C	108	200
D	288	417
E	0	207
G	0	207