

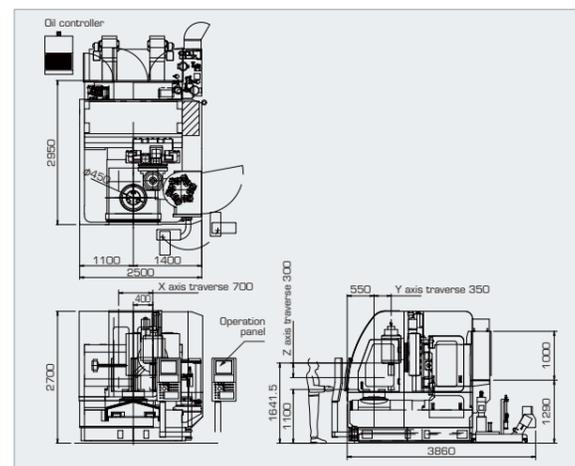
Main specification

Machining capacity	Max. workpiece diameter	mm	φ450
	Max. machining module	-	m4.5
	Max. machining teeth width	mm	120
	Max. workpiece height	mm	250
Cutter spindle	Gear cutting tool	-	Skiving cutter
	Spindle taper hole (tool shank type)	-	7/24 Taper No.50 (BBT50)
	Max. RPM of spindle	min-1	3000
Workpiece spindle	Motor (30 min/continuous)	kw	26/22
	Max. RPM of spindle	min-1	1400
	Motor (30 min/continuous)	kw	26/22
Each unit traverse	Left - Right traverse (X-axis)	mm	700
	Forward - Back traverse (Y-axis)	mm	350
	Up - Down traverse (Z-axis)	mm	300
	Tool swivel angle (B-axis)	deg	±25
	Number of tool storage	本	6
A.T.C.	Max. tool diameter	mm	φ150
	Max. tool length	mm	250
	Tool selection method	-	Tool storage position fixed / random
	Type	-	FANUC 31i-B
NC device	Display	-	FANUC PANEL-i
	Overall power used	kVA	88
Utilities	Machine height	mm	2700
	Required floor space (width x depth)	mm	2500x3860
Dimensions of machine	Net machine weight (main body)	kg	22000
	Workpiece chuck	External scale	22 piece ATC
Options	Hard machining package		
	Workpiece handling by robots		

Providing cutting tools optimized for workpiece size and effective production

Production volume	▲More	2-axis helical broaching machines Hx-T50-23DHAL		
	Fewer▼	Helical broaching machines Hx-T25-17		
Workpiece size	9,000 units/month	Skiving machining center for Gears GMS450		
		Gear Shaping Center GM7134		
Market		φ200	φ450	φ700
		Cars	Trucks	Industrial machinery (construction machinery)
		Reduction gears		

Layout diagram



Skiving cutter

Propose our skiving cutter and cutting conditions to match the various workpiece specifications and applications.



Features of NACHI cutters

- Analyzed cutting mechanism with the cutting tool design technology and gear cutting technology that we have developed. Improved precision of machining work and extended tool life.
- Established surface processing technology needed for skiving that produces better surfaces with optimized deposition process and design of coating components.
- Carbide skiving cutters are able to achieve hard skiving process after heat treatment.



Super accurate high performance skiving at peak of ideals

Skiving machining center for Gears

GMS450

Integrated skiving gear shaping machine



NACHI-FUJIKOSHI CORP.

This machine is considered a strategic resource (or service) according to restrictions in the foreign exchange and trade laws. Based on these laws, export from Japan requires an export permit from the Japanese government.

<http://www.nachi.com>

Toyama Head Office	1-1-1 Fujikoshi-Honmachi, Toyama 930-8511	Tel: +81-(0)76-423-5111	
Tokyo Head Office	Shiodome Sumitomo Bldg. 17F, 1-9-2 Higashi-Shinbashi, Minato-ku, Tokyo 105-0021	Tel: +81-(0)3-5568-5246	
NACHI AMERICA INC. HEAD QUARTERS	715 Pushville Road, Greenwood, Indiana, 46143, U.S.A.	Tel: +1-317-530-1001	Fax: +1-317-530-1011
NACHI EUROPE GmbH	Bischofstrasse 99, 47809, Krefeld, GERMANY	Tel: +49-(0)2151-65046-0	Fax: +49-(0)2151-65046-90
NACHI SINGAPORE PTE. LTD.	No.2 Joo Koon Way, Jurong Town, Singapore 628943, SINGAPORE	Tel: +65-65587393	Fax: +65-65587371
NACHI TECHNOLOGY (THAILAND) CO., LTD.	Unit 23/109(A), Fl.24th Sorachai Bldg., Sukhumvit 63 Road(Ekamai), Klongtonnua, Wattana, Bangkok 10110, THAILAND	Tel: +66-2-714-0008	Fax: +66-2-714-0740
NACHI (SHANGHAI) CO., LTD.	5F, Building A, 1988 Zhuguang Road, Quingpu District, Shanghai, 201702, CHINA	Tel: +86-(0)21-6915-2200	Fax: +86-(0)21-6915-5427

All information in this catalog is based on in-house measurements. This information is not guaranteed for all conditions. Improvements to ratings or outer appearance may result in unannounced changes.

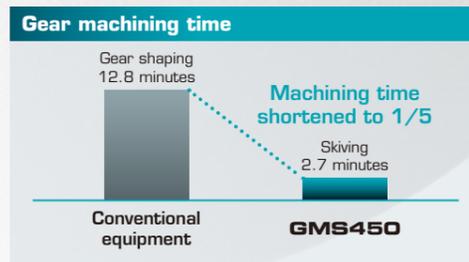
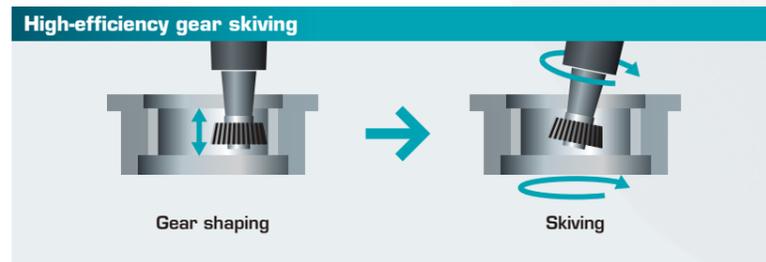
CATALOG NO. M6202E

2016.9.X.MD-SANWA

Super accurate high performance skiving at peak of ideals

Skiving machining center for Gears GMS450

- High efficiency gear skiving reduces machining time to as much as 1/5 (compared to gear shaping)
- Proprietary technologies used to add lathe and drill to skiving machine for a multi-functional gear shaper
- Both mass production & multi-type-small-hot production
- Compact yet can be machining up to 450mm diameter part
- Hard-skiving achieves high-precision machining of hardened gears
- Interactive operation screen provides excellent man-machine interface



Machining conditions: Module, 2.5 Number of tooth: 87 Tooth width: 50 mm

Three jobs consolidated in one machine

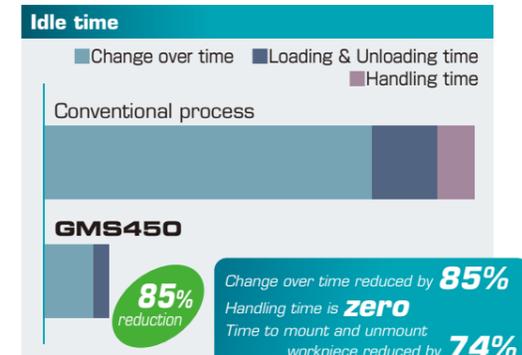
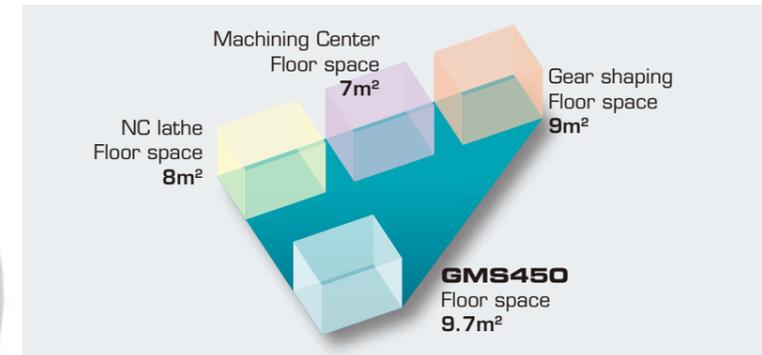
Skiving machining center for Gears GMS450 achieves a high-efficiency gear skiving machine. Plus, it also has lathe and drill functions that integrate jobs in this skiving gear shaping machine.

Skiving specification		<ul style="list-style-type: none"> ■ Max. workpiece diameter $\phi 450\text{mm}$ ■ Module m4.5 ■ Max. machining teeth width 120mm 	
Lathe specification		<ul style="list-style-type: none"> ■ Max. machining diameter $\phi 450\text{mm}$ ■ Max. RPM 1400rpm ■ Torque (max./rated) 512/305Nm ■ Motor (30 min./continuous) 26/22kW 	
Drilling specification		<ul style="list-style-type: none"> ■ Max. RPM 3000rpm ■ Motor (30 min./continuous) 26/22kW 	



To achieve smart production lines by reducing floor space

Skiving machining center for Gears requires little space to improve gear production lines to be smart production lines that can handle a variety of production formats from multi-type small-hot production to high-volume production.



Proprietary technologies produce new design skiving machine

Upright machining center built with gantry-type column Skiving machine with table that rotates on B-axis

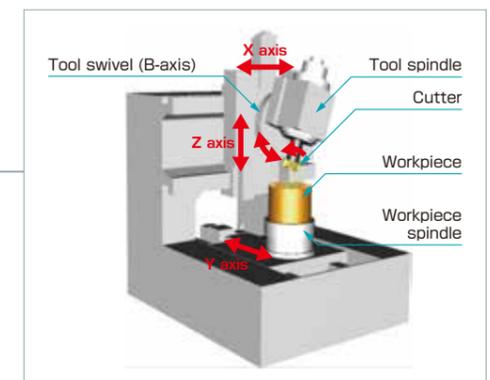
New spindle designed for skiving

Super-rigid spindle equipped with large diameter bearing and high-torque direct drive motor

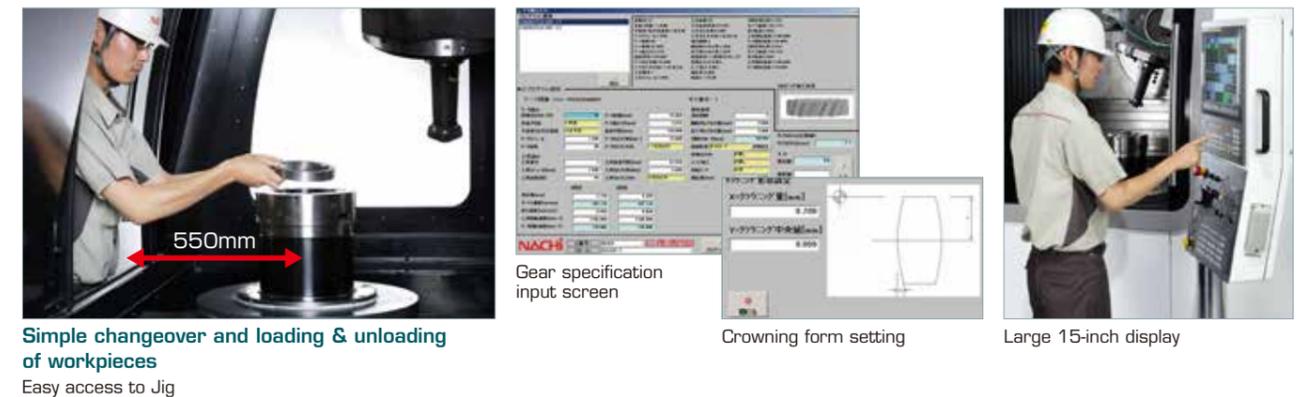
All axes have V-rail slides

V-rail slides with superior rigidity and damping used on all sliding surfaces, including the tool spindle.

X axis and B axis equipped with table clamp mechanism



Superior workability and operability



Machining application

