

PRODUCT GUIDE



NIDEC MACHINE TOOL CORPORATION

www.nidec.com/en/nidec-machinetool/

OKK
OKK CORPORATION

www.okk.co.jp

OKK MACHINERY LINE UP

Vertical Machining Center

VM/R SERIES ...P3

VP SERIES ...P3

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KCV1000...P4



VM43R II
VM53R II
VM76R II
VM660R
VM940R



VP400
VP600
VP1200
VP1200-30L
VP1800
VP2200
VP3100



Grinding Center

GC SERIES ...P4



GC43R II
GC53R II
GC76R II



VP400GC
VP600GC



VP1200GC
VP1200GC-30L
VP1800GC
VP2200GC
VP3100GC

Horizontal Machining Center

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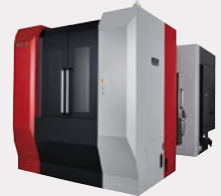
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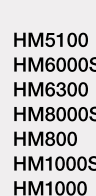
HPM40 ...P5



HMC400
HMC500



HM400/40
HM400/50
HM500S/40
HM500S/50



HM5100
HM6000S
HM6300
HM8000S
HM800
HM1000S
HM1000
HM1250S
HM1600



PM400 III
PM500



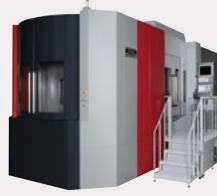
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HPM40 TYPE B

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VC-X350
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Head tilt type
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MH2V/2P
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High-Precision Gear Hobbing Machines GE15FR / Plus
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Super Skiving Machine



Precision Cutting Tools

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Gear Finishers / Grinding Machines

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FE series



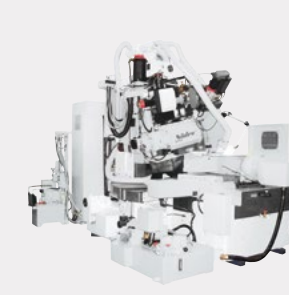
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ZI20A



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ZA30A



Cylindrical Grinding Machines

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VERTICAL MACHINING CENTER

VM/R SERIES



Machine model	Axis travel (X×Y×Z)(mm)	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Magazine capacity (tools)	Floor space (W×D×H)(mm)
VM43RⅡ	630×430×460	800×420	25~8000	BT40 Dual-contact	20	1980×2710×2623
			25~8000	BT50 Dual-contact		2090×2710×2713
VM53RⅡ	1050×530×510	1050×560	25~8000	BT40 Dual-contact	30	2825×2985×2752
			25~8000	BT50 Dual-contact		2825×2985×2815
VM76RⅡ	1540×760×660	1550×760	100~14000	BT40 Dual-contact	30	3980×3700× ^{3130 (MITSUBISHI) 3300 (FANUC)}
			25~8000	BT50 Dual-contact		3980×3700× ^{3185 (MITSUBISHI) 3300 (FANUC)}
VM660R	1300×660×660	1400×660	25~4500	BT50	30	3870×3655×3215
VM940R	2060×940×820	2300×940	25~4500	BT50	40	5600×5220× ^{3810 (MITSUBISHI) 3920 (FANUC)}

HYPER MACHINING CENTER

VP SERIES



Machine model	Axis travel (X×Y×Z)(mm)	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Magazine capacity (tools)	Floor space (W×D×H)(mm)
VP400	600×410×460	900×410	100~12000	BT40	20	2016×2690×2864
VP600	1120×610×460	1300×610	100~12000	BT40	20	2516×3100×2984
VP1200	1600×1300×460	1600×1300	100~12000	BT40	40	5800×4067×2800
VP1200-30L	3050×1300×460	3000×1300	100~12000	BT40	40	9440×4864×2900
VP1800	2200×1800×460	2200×1800	100~12000	BT40	40	7450×4622×2800 ^{※1}
VP2200	3050×2200×460	3000×2200	100~12000	BT40	40	9040×5237×2900 ^{※1}
VP3100	3500×3100×560	3600×2750	100~12000	BT40	40	10997×6203×3415 ^{※1}

※1 Includes door opening dimensions.

VERTICAL MACHINING CENTER

VB53α



Machine model	Axis travel (X×Y×Z)(mm)	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Magazine capacity (tools)	Floor space (W×D×H)(mm)
VB53α	1050×530×510	1260×600	100~20000	BT40 Dual-contact	30	2885×3050×2910

VERTICAL MACHINING CENTER

KCV1000



Machine model	Axis travel (X×Y×Z)(mm)	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Magazine capacity (tools)	Floor space (W×D×H)(mm)
KCV1000	3500×(1020+45)×720	3800×1020	35~12000	BT50	30	9420×5238×3459

GRINDING CENTER

GC SERIES



Machine model	Axis travel (X×Y×Z)(mm)	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Magazine capacity (tools)	Floor space (W×D×H)(mm)
GC43RⅡ	630×430×460	800×420	100~14000	BT40 Dual-contact	20	3703×4405×2757
GC53RⅡ	1050×530×510	1050×560	100~14000	BT40 Dual-contact	30	3535×4570×2831
GC76RⅡ	1540×760×660	1550×760	100~14000	BT40 Dual-contact	30	3980×5250× ^{3150 (MITSUBISHI) 3300 (FANUC)}
VP400GC	600×410×460	900×410	100~12000	BT40	20	3711×4810×2746 ^{※1}
VP600GC	1120×610×460	1300×610	100~12000	BT40	20	3711×5250×2796 ^{※1}
VP1200GC	1600×1300×460	1600×1300	100~12000	BT40	40	4107×7582×2895 ^{※1}
VP1200GC-30L	3050×1300×460	3000×1300	100~12000	BT40	40	4484×10420×2995 ^{※1}
VP1800GC	2200×1800×460	2200×1800	100~12000	BT40	40	4699×9500×2895 ^{※1}
VP2200GC	3050×2200×460	3000×2200	100~12000	BT40	40	5145×10420×2995 ^{※1}
VP3100GC	3500×3100×560	3600×2750	100~12000	BT40	40	12367×6203×3530 ^{※1}

※1 Includes door opening dimensions.

HORIZONTAL MACHINING CENTER

HMC SERIES



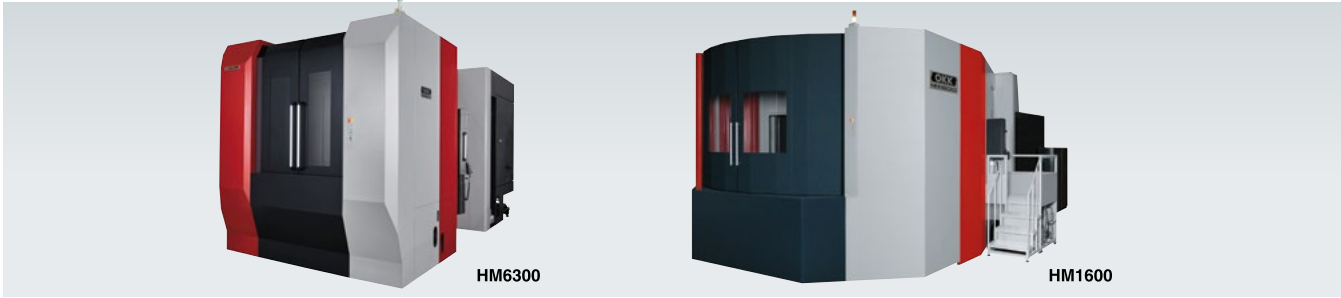
Machine model	Axis travel (X×Y×Z)(mm)	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Magazine capacity (tools)	Floor space (W×D×H)(mm)
HMC400	560×560×690	□400	100~15000	BT40	40	3905×5425×2640 ^{※1 ※2}
HMC500	760×760×800	□500	100~15000	BT40	60	4150×5790×3605 ^{※1 ※2}

※1 Includes door opening dimensions.
※2 Opt.For the Lift-up tyre chip conveyor specification



HORIZONTAL MACHINING CENTER

HM SERIES



Machine model		Axis travel (X×Y×Z)(mm)	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Magazine capacity (tools)	Floor space (W×D×H)(mm)
HM400/40		630×620×710	□ 400	35~10000	BT40	40	4105×4880×2844 ※1 ※2
HM400/50		630×620×710	□ 400	35~12000	BT50	40	4343×4880×2970 ※1 ※2
HM500S/40		630×620×710	□ 500	35~10000	BT40	40	4105×4880×2844 ※1 ※2
HM500S/50		630×620×710	□ 500	35~12000	BT50	40	4343×4880×2970 ※1 ※2
HM5100		800×750×880	□ 500	35~12000	BT50	60	4980×5380×4115 ※1 ※2
HM6000S		800×750×880	□ 630	35~12000	BT50	60	4980×5380×4115 ※1 ※2
HM6300		1050×900×1030	□ 630	35~12000	BT50	60	5250×5825×4115 ※1 ※2
HM8000S		1050×900×1030	□ 800	35~12000	BT50	60	5250×5825×4115 ※1 ※2
HM800		1400×1100×1050	□ 800	35~12000	BT50	60	5147×6785×4335 ※1 ※2
HM1000S		1400×1100×1000	□1000	35~12000	BT50	60	5147×6785×4335 ※1 ※2
HM1000		1700×1400×1400	□1000	35~12000	BT50	60	5950×8195×4610 ※1 ※2
HM1250S		1700×1400×1240	□1250	35~12000	BT50	60	5950×8195×4610 ※1 ※2
HM1600	12000-min ⁻¹ MS spindle	2400×1650×1750	1600×1250	35~12000	BT50	60	7485×10770×4370 ※1 ※2
	8000-min ⁻¹ gear spindle	2400×1650×1750	1600×1250	20~ 8000	BT50	60	7485×10770×4370 ※1 ※2

※1 Includes door opening dimensions.
※2 Opt.For the Lift-up tyre chip conveyor specification

HORIZONTAL MACHINING CENTER

PM SERIES HPM40 SERIES



Machine model	Axis travel (X×Y×Z)(mm)	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Magazine capacity (tools)	Floor space (W×D×H)(mm)
PM400III	500×500×500	φ 400	100~14000	BT40	20	1900×3900×2620
PM500	650×600×600	φ 500	35~6000	BT50	30	3655×3895×3050
HPM40 TYPE A	600×600×500	φ 400	100~12000	BT40	24	2450×5000×2750
HPM40 TYPE B	600×500×500	φ 400	100~12000	BT40	24	1750×5495×2980

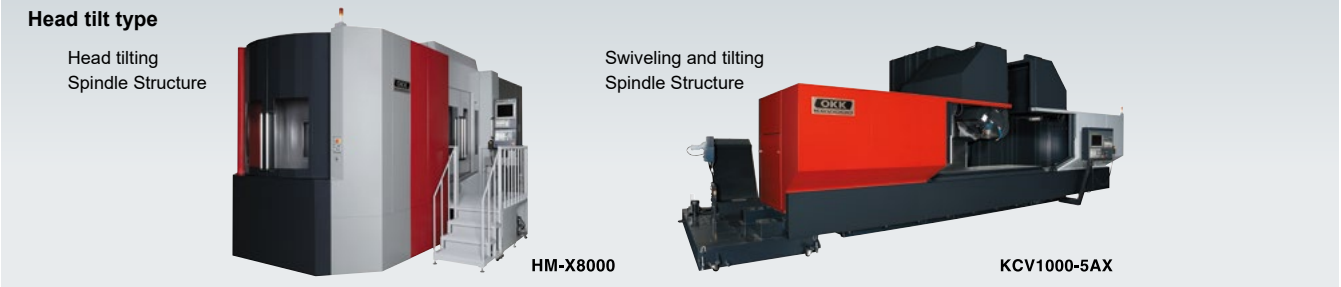
5 AXIS MACHINING CENTER

SAX SERIES



Machine model	Axis travel (X×Y×Z)(mm)	Additional axis travel	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Magazine capacity (tools)	Floor space (W×D×H)(mm)
VC-X350	600×430×460	A: -120~+30° C: 360°	φ 350	100~12000	BT40	20	1895×3440×3070
VC-X500	700×850×610	A: -120~+30° C: 360°	□ 500	100~12000	BT40 Dual-contact	40	3720×2450×3500
HM-X6000	1050×900×820	A: -110~+20° B: 360°	□ 600	35~12000	BT50	60	5055×5450×3430 ※1

※1 Includes door opening dimensions.



Machine model	Axis travel (X×Y×Z)(mm)	Additional axis travel	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Magazine capacity (tools)	Floor space (W×D×H)(mm)
HM-X8000	1300×1100×1550	A: -110~+40° B: 360°	□ 800	35~12000	BT50	60	5433×7755×4290 ※1 ※2
KCV1000-5AX	3500×1020×720	A: -35~+35° B: -35~+35°	3800×1020	35~12000	BT50	30	9714×5793×3730 ※1

※1 Includes door opening dimensions.
※2 Opt.For the Lift-up tyre chip conveyor specification

NC MILLING MACHINE

MHNC SERIES MH SERIES



Machine model	Axis travel (X×Y×Z)(mm)	Table work surface area (mm)	Spindle speed (min ⁻¹)	Spindle taper	Floor space (W×D×H)(mm)
MH2NCV/2NCP	720×300×450	1310×300	60~1800	BT50	2620×1700×2410
MH3NCV/3NCP	920×380×450	1650×380	45~1600	BT50	3160×1890×2640
MH2V/2P	720×260×450	1310×300	60~1800	BT50	2420×1620× ^{2175 (2V)} ^{2205 (2P)}
MH3VⅡ/3PⅡ	920×350×450	1650×380	45~1600	BT50	3085×1860× ^{2406 (3VⅡ)} ^{2405 (3PⅡ)}

Steel Plate Machining Equipment

F3000V



Machine model	Axis travel (X×Z)(mm)	Size of magnet chuck top surface (mm)	Maximum workpiece size (W×D×H) (mm)	Spindle speed (min ⁻¹)	Spindle end diameter (mm)	Floor space (W×D×H)(mm)
F300V	950 × 300	600 × 300	500 × 200 × 150	45~500 45~900 (Opt.)	Equivalent to JIS B6160 No.60	3093 × 1812 × 2590

General Purpose Machines

Double column type, 5-face Milling Machines

MVR-Cx series



MVR30Cx

Item		Model	MVR25Cx	MVR30Cx
Table	Working area	Width (mm in)	1,500 59.1	2,000 78.7
		Length (mm in)	3,000 118.1 (opt.4,000 157.5)	4,000 157.5 (opt.5,000 196.9)
	Loading capacity (ton lb)		15 33,000	20 44,000
Throat clearance between columns		(mm in)	2,050 80.7	2,550 100.4
Distance from spindle end to table surface		(mm in)	1,650 65.0	
Spindle	Ram Size (mm in)		□350 13.8	
	Diameter of Vertical spindle tip (mm in)		φ220 φ8.6	
	Spindle speed (min ⁻¹)		20 ~ 4,000 (opt.20 ~ 6,000)	
	Spindle motor output (kW HP)		22/30 30/40 : Cont. Low/High	
Tool storage capacity (ATC)			50 (opt.80)	
Machine weight (kg/Working area mm in)			34,670/3,000 76,700/118.1	41,690/4,000 92,000/157.5

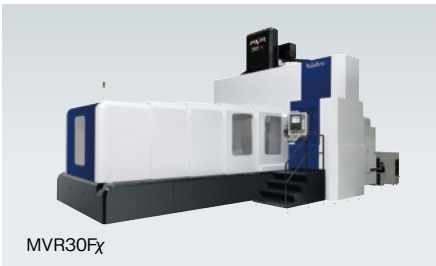
MVR-Hx series



MVR30Hx

Item		Model	MVR25Hx	MVR30Hx	MVR35Hx	MVR40Hx	MVR45Hx
Table	Working area	Width (mm in)	1,500 59.1	2,000 78.7	2,500 98.4	3000 118.1	3,500 137.8
		Length (mm in)	3,000 118.1 ~ 8,000 315.0 (Opt.)	3,000 118.1 ~ 10,000 393.7 (Opt.)	4,000 157.5 ~ 10,000 393.7 (Opt.)	6,000 236.2 ~ 10,000 393.7 (Opt.)	6,000 236.2 ~ 10,000 393.7 (Opt.)
	Loading capacity (ton/m lb/in)		12/3.0 26,400/118.1 ~ 20/8.0 44,000/315.0 (Opt.)	20/3.0 44,000/118.1 ~ 30/10.0 66,100/393.7 (Opt.)	25/4.0 55,100/157.5 ~ 30/10.0 66,100/393.7 (Opt.)	35/6.0 77,100/236.2 ~ 25/10.0 55,100/393.7 (Opt.)	35/6.0 77,100/236.2 ~ 25/10.0 55,100/393.7 (Opt.)
Throat clearance between columns		(mm in)	2,050 80.7	2,550 100.4	3,250 128.0	3,750 147.6	4,250 167.3
Distance from spindle end to table surface		(mm in)	1,650 65.0 (opt. 2,010 79.1)		1,850 72.8 (opt. 2,150 84.6)		2,150 84.6
Ram	Size (mm in)		□350 13.8				
	Spindle speed (min ⁻¹)		20 ~ 8,000 (opt. 17~6,000, 11 ~ 4,000, 40 ~ 12,000)				
	Spindle motor output (kW HP)		Cont. 22/30 30/40 :Low/High (opt. 18.5/26 24/35 :Low/High, 22/30 30/40 :Cont./30min, 22/30 30/40 :Cont./30min)				
Tool storage capacity (ATC)			60 (opt. 80, 100, 120, 180)				
Machine weight (kg/Working area mm in)			35,890/3,000 79,100/118.1	39,390/3,000 86,800/118.1	59,340/4,000 130,800/157.5	67,340/4,000 148,400/157.5	104,740/6,000 230,800/236.2

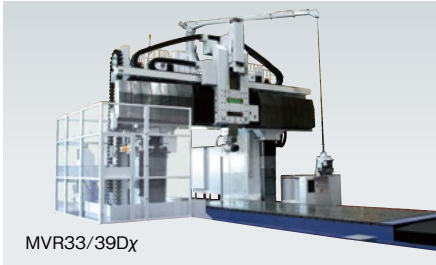
MVR•Fx series: Large Precision Machine



MVR30Fx

Item		Model	MVR30Fx	MVR35Fx
Table	Working area	Width (mm in)	2,000 78.7	2,500 98.4
		Length (mm in)	3,000 118.1 (opt. 4,000 157.5, 5,000 196.9)	4,000 157.5 (opt. 5,000 196.9)
	Loading capacity (ton lb)		20 44,000	25 55,100 (opt. 30 66,200)
Throat clearance between columns		(mm in)	2,550 100.4	3,050 120.1
Distance from spindle end to table surface		(mm in)	1,650 65.0 (opt. 2,000 78.7)	
Ram	Size (mm in)		420 16.5 sq.	
	Spindle speed (min ⁻¹)		20,000	
	Spindle motor output (kW HP)		22/18.5 30/25 (Cont./30 min)	
Tool storage capacity (ATC)			40 (opt. 60, 80, 100)	
Machine weight (kg/Working area mm in)			55,400 122,200/3,000 118.1	64,300 141,800/4,000 157.5

MVR•Dx series: High efficiency Large Machine



MVR33/39Dx

Item		Model	MVR28/34Dx	MVR33/39Dx	MVR38/44Dx	MVR43/49Dx	MVR48/54Dx
Table	Working area	Width (mm in)	2,000 78.7	2,500 98.4	3,000 118.1	3,500 137.8	4,000 157.5
		Length (mm in)	4,000 157.5 (opt. 5,000 196.9, 6,000 236.2, 8,000 315.0)		5,000 196.9 (opt. 6,000 236.2, 8,000 315.0)		6,000 236.2 (opt. 7,000 276.6, 8,000 315.0)
	Loading capacity (ton/m lb/in)		25/4.0 98.4/157.5 (opt. 30/5.0 66,200/196.9, 36/6.0 79,400/236.2, 48/8.0 105,900/315.0)		35/5.0 77,100/196.9 (opt. 42/6.0 92,600/236.2, 56/8.0 123,500/315.0)		45/6.0 100,000/236.2 (opt. 56/8.0 123,500/315.0)
Throat clearance between columns		(mm in)	2,850 112.2	3,350 131.9	3,850 151.6	4,350 171.3	4,850 190.9
Distance from spindle end to table surface		(mm in)	2,050 80.7 (opt. 2,550 100.4, 3,050 120.1)		3,050 110.2 (opt. 2,050 80.7, 2,550 100.4)		3,050 110.2 (opt. 3,550 140.0, 4,050 159.4)
Ram	Size (mm in)		400 15.7 sq.				
	Spindle speed (min ⁻¹)		7~4,000				
	Spindle motor output (kW HP)		37/45 50/60 (opt. 45/55 60/70 Cont./30 min)				
Tool storage capacity (ATC)			60 (opt. 80, 100, 120, 160, 200, 240)				
Machine weight (kg/Working area mm in)			107,000/4,000 235,900/157.5	110,000/4,000 242,600/157.5	118,000/5,000 260,200/196.9	121,000/5,000 266,800/196.9	136,400/6,000 300,800/236.2

NIDEC MACHINE TOOL CORPORATION

Horizontal Boring Mills

MAF-EII Series (Table type)



MAF130EII

Item		Model	MAF130EII		
Boring spindle diameter		(mm in)	φ130 φ5.1		
Table	Working area	(mm in)	1,800 x 2,000 70.9 x 78.7	2,000 x 2,200 78.7 x 86.6	2,000 x 2,500 78.7 x 98.4
	Indexing		Indexing at every 0.0001 deg. (opt. Cutting feed B axis)		
	Loading capacity	(kg lb)	20,000 44,100		
Travels	Table, horizontal X-axis	(mm in)	3,000 118.1		
	Spindle head, vertical Y-axis	(mm in)	2,300 90.6		
	Column, in/out Z-axis	(mm in)	1,600 63.0		
	Boring spindle, in/out W-axis	(mm in)	800 31.5		
Spindle head	Spindle speed	(min ⁻¹)	5~2,500		
	Spindle motor output	(kW HP)	VAC 30/37 40/50 (cont./30 min. rating)		
Tool storage capacity (ATC)			50 (opt. 80, 100)		
Machine weight		(kg lb)	45,000 99,300	45,500 100,400	46,000 101,500

MAF-S Series (Floor type)



MAF150S-C

Item		Model	MAF130S	MAF150S
Travels	Column, horizontal X-axis	(mm in)	1,500 59.1 (opt. Extendible at every 500 19.7)	
	Saddle, vertical Y-axis	(mm in)	1,500 59.1 (opt. 2,000 78.7, 2,500 98.4)	
	Boring spindle Z-axis	(mm in)	650 25.6	
Boring spindle diameter		(mm in)	φ130 φ5.1	φ150 φ5.9
Boring spindle end taper			No.50	
Spindle speed		(min ⁻¹)	25~2,500 (opt. 25~3,000)	25~2,500
Spindle motor output		(kW HP)	18/22 24/30 (opt. 22/30 30/50)	
Machine weight		(kg lb)	20,000 44,000	22,000 48,400

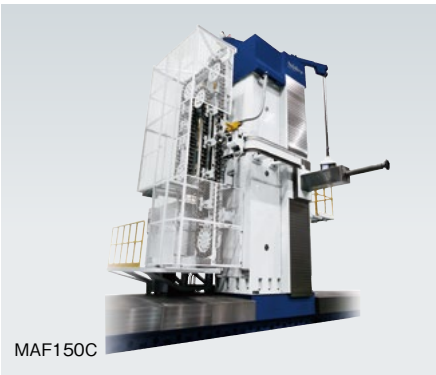
MAF-R Series (Floor type)



MAF150R

Item		Model	MAF130R	MAF150R
Travel	Column, horizontal X-axis	(mm in)	5,000 196.9~21,000 826.8	
	Saddle, vertical Y-axis	(mm in)	2,500 98.4 (opt. 3,000 118.1, 3,500 137.8)	
	Ram, in/out Z-axis	(mm in)	700 27.6	
	Boring spindle W-axis	(mm in)	700 27.6	
Boring spindle diameter		(mm in)	φ130 φ5.1	φ150 φ5.9
Boring spindle end taper			No.50	
Milling spindle diameter		(mm in)	φ225 φ8.9	
Spindle speed		(min ⁻¹)	7~3,000	
Spindle motor output		(kW HP)	30/37 40/50 (Cont. /30 min.)	
Machine weight		(kg lb)	35,000 77,200	

MAF-C Series (Floor type)



MAF150C

Item		Model	MAF150C	MAF180C
Travel	Column, horizontal X-axis	(mm in)	5,000 196.9 (opt. Extendible at every 2,000 78.7)	
	Saddle, vertical Y-axis	(mm in)	3,000 118.1 (opt. 4,000 157.5, 5,000 196.9)	
	Ramstock, in/out Z-axis	(mm in)	1,250 49.2	
	Boring spindle W-axis	(mm in)	1,000 39.4	
Boring spindle diameter		(mm in)	φ150 φ5.9	φ180 φ7.1
Boring spindle end taper			No.50	
Milling spindle diameter		(mm in)	φ200 φ7.9	φ240 φ9.4
Spindle speed		(min ⁻¹)	6~2,500	
Spindle motor output		(kW HP)	55/75/85 74/101/114 (Cont. /30 min. /10 min.)	
Machine weight		(kg lb)	33,000 72,700	

Precision Machines

Precision Machines μV1 μV5



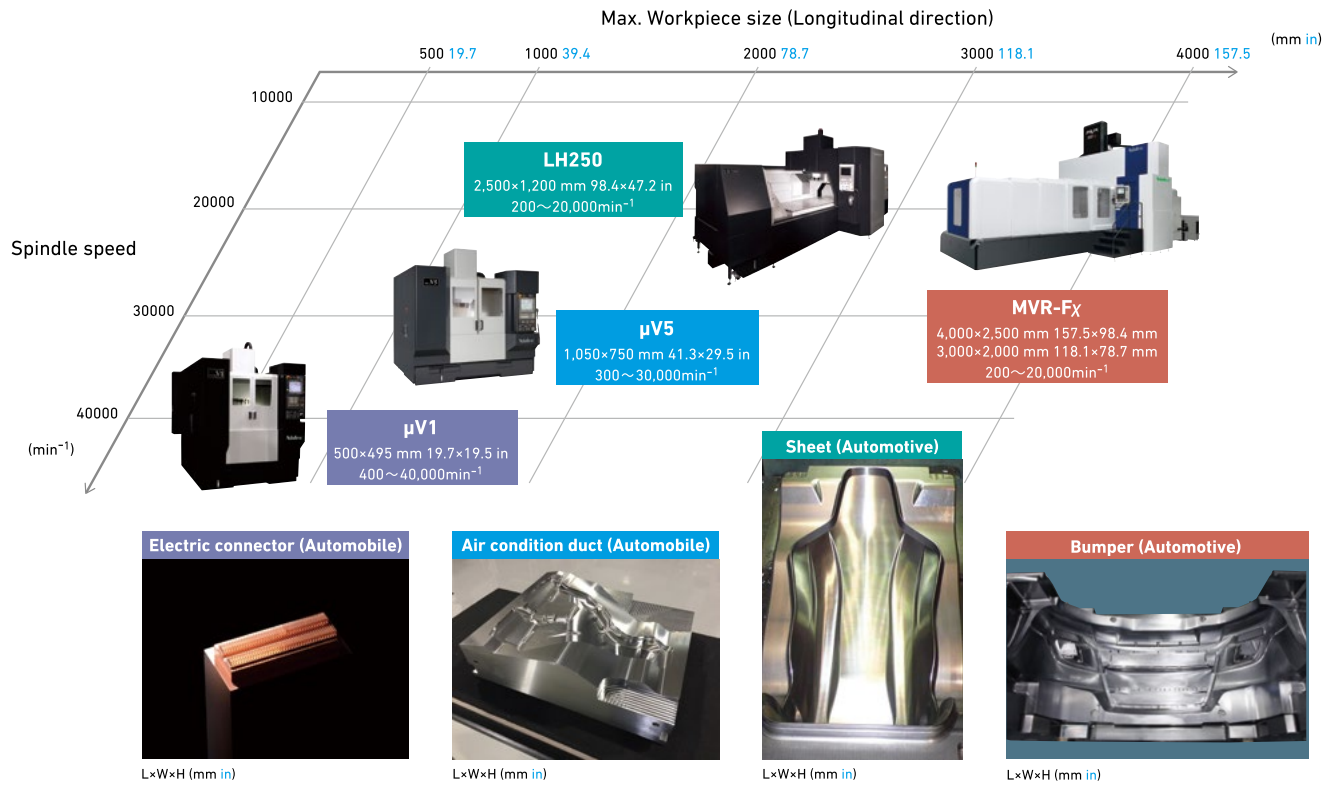
Item	Model	μV1 (3-axis machine)	μV1-5X (5-axis machine)	μV5
Table Working Surface	(mm in)	500 × 400 19.7 × 15.7	φ100 φ3.9	1,050×500
Max. workpiece size	(mm in)	W: 500 × D: 495 × H: 300	φ160 φ6.3	W: 1,050 × D: 700 × H: 450
*An interference limit to be confirmed				
		W: 19.7 × D: 19.5 × H: 11.8		W: 41.3 × D: 27.6 × H: 17.7
Travels	X axis	(mm in)	450 17.7	900 35.4
	Y axis	(mm in)	350 13.8	550 21.7
	Z axis	(mm in)	300 11.8	450 17.7
	B axis	(mm in)	—	—
Rapid traverse rate	C axis	(mm in)	—	—
	X, Y, Z axes	(mm/min ipm)	15,000 590.6	—
	B axis	(min ⁻¹)	75	—
Spindle speed	C axis	(min ⁻¹)	100	—
	(min ⁻¹)	400~40,000	300~30,000	
Max. spindle motor output	(kW HP)	7.5 10	15 20	
Taper size		HSK-E32	HSK-E50	
ATC tool strage capacity		18 (opt. 30, 36)	18	
Machine weight	(kg lb)	5,500 12,200	10,500 23,200	

High-Precision Double Column Machining Center LH250



Item	Model	LH250
Table working surface	(mm in)	2,500 × 1,000 98.4×39.4
Max. loading capacity	(kg lb)	3,000 118.1
Axes Travel (X x Y x Z)	(mm in)	2,500 x 1,000 x 600 98.4×39.4×23.6
Distance from spindle end to table top	(mm in)	200~800 7.9~31.5
Taper size, tool shank		HSK-A63
Spindle bearing diameter	(mm in)	φ80 φ3.1
Spindle speed	(min ⁻¹)	200~20,000
Spindle motor output (30min/Cont.)	(kW HP)	22/18.5 30/25
Rapid traverse rate	(mm/min ipm)	12,000 472.4
Cutting feedrate	(mm/min ipm)	1~12,000 0.04~472.4
ATC tool storage capacity		40
Machine weight	(kg lb)	21,000 46,300

High-Precision Machining Machine Line-up



Micro Machining Systems

NIDEC MACHINE TOOL CORPORATION

Laser Micromachining System

ABLASER



Item	Model	ABLASER	ABLASER-DUV
X-axis x Y-axis x Z-axis	(mm in)	300 × 200 × 100 11.8 × 7.9 × 3.9	(Precision scale equipped as standard)
Positioning accuracy	(mm in)	0.002 0.00008	
Maximum feed rate	(m/min ipm)	10 32.8	
Maximum output power	(W HP)	30 0.04	2 0.003
Pulse width	(ps)	<10 (Oscillator built into the machine)	
Wavelength	(nm)	515	266
Workpiece diameter*1	(mm in)	φ0.05~0.3 φ0.002~0.012	φ0.01~0.3 φ0.0004~0.012
Taper hole control		Forward taper/reverse taper/hand-drum shaped	
Assist gas		Selectable for each workpiece	
Width x Depth x Height*2	(mm in)	2,040 80.3 × 2,590 102.0 × 2,220 87.4	
Machine weight*2	(t lb)	5.0 11,030	
Machine equipment		Own produced laser head, Fume collector, Heat-resistant covers for the X/Y/Z-axis, Laser beam adjustment function	

*1: It depends on the type of material. *2: The weight of the machine only, excluding the control enclosure and attachments

Industrial metal 3D printer (DED*1 AM System)

LAMDA200



Item	Model	LAMDA200	LAMDA500	LAMDA2000	LAMDA2000
Max. AM dimensions	(mm in)	200 × 200 × 200 7.9 × 7.9 × 7.9	500 × 500 × 500 19.7 × 19.7 × 19.7	2,000 × 1,500 × 1,600 78.7 × 59.1 × 63.0	2,500 × 900 × 1,000 98.4 × 35.4 × 39.4
Laser output	(kW HP)	1 1.3, 2 2.7, 4 5.4, 6 8.0			
Number of powder feeder hopper		1 (Max. 2 hoppers)			
Inert gas shield		Available			
Spindle spec.		Available			—
NC 2 axis table		Available (1 axis or 2 axes table)			
Fixture cooling		Available			
Width x Depth	(mm in)	4,000 × 2,600 157.5 × 102.4	4,100 × 5,000 161.4 × 196.9	12,000 × 6,500 472.4 × 255.9	7,000 × 5,500 275.6 × 216.5
Machine weight*2	(kg lb)	2,500 5,600	7,500 16,600	44,000 97,000	12,000 26,500

*1: DED: Directed Energy Deposition *2: The weight of the machine only, excluding the control enclosure and attachments

Room Temperature Wafer Bonding Machine

BOND MEISTER

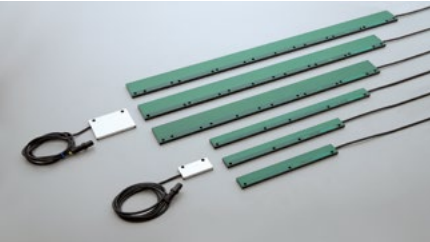


Item	Model	MWB-04/06/08-AX
Set wafer		10 sets
Wafer diameter	(mm in)	100 4/150 6/200 8
Operation		Full-automatic/Semi-automatic
Alignment accuracy	(μm in)	±2 ±8×10 ⁻⁵ (Measured value*1)
Surface activation		Ion gun/FAB gun
Press unit		Max. press force 100 kN
Alignment		By IR transparent Image
Degree of vacuum		<1.0×10 ⁻⁵ Pa
Utility		Argon gas, Nitrogen gas, Compressed air, Cooling water, Power supply (200 V, 100 V)

*1: Measured value does not mean the guaranteed value.
*2: Please inquire of these models: The standard model for R&D use (R series) & the corresponding to 12 inches model

Precision Position Feedback Detector

Linear Feedback Detector



Rotary Feedback Detector



A/D Converter



Gear Machining System

Gear Hobbing Machines

SuperDry Gear Hobbing Machines GE Series



Model		GE06A	GE15A / GE15A with chamfering station	GE20A / GE20A with chamfering station	GE25A / GE25A with chamfering station
Item					
Max. workpiece diameter (mm in)		φ60 φ2.4	φ150 φ5.9	φ200 φ7.9	φ250 φ9.8
Max. cutting module DP		4 6.35	4 6.35	6 4.23	6 4.23
Axial travel (mm in)		200 7.9	250 9.8 (opt. 400 15.7)	250 9.8 (opt. 400 15.7)	250 9.8 (opt. 400 15.7)
Radial travel (mm in)		120 4.7	140 5.5 (opt. 125 4.9)	225 8.6	210 8.3
Hob	Max. diameter (mm in)	φ90 φ3.5	φ110 φ4.3	φ130 φ5.1	φ130 φ5.1
	Max. length (mm in)	150 5.9	180 7.1	230 9.1	230 9.1
	Shift (mm in)	130 5.1	150 5.9	180 7.1	180 7.1
	Speed (min ⁻¹)	335~2,660 (opt. 500~4,000)	200~2,000 (opt. 300~3,000)	200~2,000 (opt. 300~3,000)	150~1,500
Max. table speed (min ⁻¹)		500	300 (opt. 500)	300 (opt. 500)	150
Total electric power (kVA)		19	22 (opt. 27) / 23 (opt. 28)	27 (opt. 30) / 28 (opt. 31)	36 (opt. 40) / 37 (opt. 41)
Machine weight (kg lb)		6,300 13,900	8,500/8,900 18,800/19,700	9,200/9,600 20,300/21,200	11,000/11,400 24,300/25,200

Size of workpiece accommodated in the machine with chamfering station might be limited depending on specifications of workpieces and/or cutters.
Please contact with our sales offices for further detail.

Gear Hobbing Machines G Series



Model		Vertical models				Horizontal model
Item		GD30	GD50	GB63*	GB100*	GBH18*
Max. workpiece diameter (mm in)		φ300 φ11.8	φ500 φ19.7	φ630 φ24.8	φ1,000 φ39.4	φ180 φ7.1
Max. module DP		8 3.18		14 1.81		6 4.23
Axial travel (mm in)		300 11.8		500 19.7		700 27.6
Radial travel method		Column traveling		Column traveling		Hob saddle traveling
Hob and work centers distance (mm in)		40~340 1.6~13.4		50~625 2.0~24.6		30~155 1.2~6.1
Hob	Max. diameter x length (mm in)	φ150 x 230 φ5.9 x 9.1		φ210 x 240 φ8.3 x 9.4		φ120 x 200 φ4.7 x 7.9
	Shift (mm in)	180 7.1		200 7.9		180 7.1
	Speed (min ⁻¹)	75~750 (opt. 120~1,200)		30~225 (opt. 40~400)		150~1,000
Axial cutting travel (mm/min. ipm)		1~1,000 0.04~39.4		0.1~300 0.004~11.8		1~400 0.04~15.7
Indexing tooth number		5~1,000	5~1,000	6~1,000	6~1,000	4~200
Controlled axes		5		5		5
Total electric power (kVA)		33		33		20
Machine weight (kg lb)		10,000 22,000	10,500 23,100	16,000 35,300	18,000 39,700	7,000 15,500

*By special order

High-Precision Gear Hobbing Machines GE15FR/GE15FR Plus



Model		GE15FR	GE15FR Plus
Item			
Max. workpiece diameter (mm in)		φ150 φ5.9	φ150 φ5.9
Max. module DP		2.5 10.2	1.25 20.3
Axial travel (mm in)		250 9.8	250 9.8
Radial travel (mm in)		140 5.5	140 5.5
Hob	Max. diameter (mm in)	φ100 φ3.9	φ75 φ3.0
	Max. length (mm in)	150 5.9	150 5.9
	Shift (mm in)	150 5.9	150 5.9
	Speed (min ⁻¹)	600~6,000 Direct Drive	800~8,000 Direct Drive
Max. table speed (min ⁻¹)		2,000 Direct Drive	1,000 Direct Drive
Total electric power (kVA)		35	37
Machine weight (kg lb)		8,500 18,800	8,500 18,800

High Performance Gear Hobbing Machine GE15HS/GE25HS



Model		GE15HS	GE25HS
Item			
Max. workpiece diameter (mm in)		φ150 φ5.9	φ250 φ9.8
Max. module DP		4 6.35	6 4.23
Axial travel (mm in)		250 9.8	250 9.8
Radial travel (mm in)		140 5.5	210 8.3
Hob	Max. diameter (mm in)	φ90 φ3.5	φ130 φ5.1
	Max. length (mm in)	190 7.5	230 9.1
	Shift (mm in)	150 5.9	180 7.1
	Speed (min ⁻¹)	600 ~ 6,000 Direct Drive	230 ~ 2,300
Max. table speed (min ⁻¹)		500 Direct Drive	200
Total electric power (kVA)		43	40
Machine weight (kg lb)		8,500 18,800	11,000 24,300

NIDEC MACHINE TOOL CORPORATION

Gear Shaping Machines

SuperDry Gear Shaping Machines SE Series



Model		SE15A	SE25A
Item			
Max. workpiece diameter	External gear (mm in)	φ150 φ5.9	φ250 φ9.8
	Internal gear (mm in)	φ150 φ5.9 (φ60 φ2.4 + cutter dia.)	φ250 φ9.8 (φ120 φ4.7 + cutter dia.)
Max. module DP		4 6.35	6 4.23
Max. gear width (mm in)		32 1.3	60 2.4
Cutter stroke (str./min.)		400~2,000	180~1,800
Number of cuts		1~4	1~4
Main motor (kW HP)		7.5 10	
Controlled axes		4 or 5	
Total electric power (kVA)		22	24
Machine weight (kg lb)		6,500 14,400	9,000 19,900

Gear Shaping Machines S Series



Model		SC40CNC	SC63CNC*	SC100CNC*
Item				
Max. workpiece diameter	External gear (mm in)	φ400 φ15.7	φ650 φ25.6	φ1,000 φ39.4
	Internal gear (mm in)	φ400 φ15.7 (φ250 φ9.8 + cutter dia.)	φ600 φ23.6	φ1,000 φ39.4
Max. module DP		8 3.18	8 3.18	12 2.12
Max. gear width (mm in)		115 4.5	200 7.9	200 7.9
Cutter stroke (str./min.)		50~800	30~300	30~300
Number of cuts		1~4	1~4	1~4
Main motor (kW HP)		7.5 10	16 x 2 21 x 2	16 x 2 21 x 2
Controlled axes		5	5	5
Total electric power (kVA)		31	41	41
Machine weight (kg lb)		10,000 22,100	17,000 37,500	17,000 37,500

*By special order

Flexible Guide Type Gear Shaping Machines ST Series



Model		ST25CNC	ST40CNC	ST40A
Item				
Max. workpiece diameter	External gear (mm in)	φ250 φ9.8	φ400 φ15.7	φ400 φ15.7
	Internal gear (mm in)	φ250 φ9.8 (φ120 φ4.7 + cutter dia.)	φ400 φ15.7 (φ250 φ9.8 + cutter dia.)	φ400 φ15.7 (φ250 φ9.8 + cutter dia.)
Max. module DP		6 4.23	8 3.18	8 3.18
Max. gear width (mm in)		60 2.4	115 4.5	115 4.5
Cutter stroke (str./min.)		120~1,000	60~500	30~600
Number of cuts		1~4	1~4	1~4
Main motor (kW HP)		22 30	30 40	30 40
Controlled axes		6	6	6 or 7
Total electric power (kVA)		29	33	49
Machine weight (kg lb)		7,500 16,600	10,000 22,100	11,500 25,400

High-Precision Gear Shaping Machines SE25FR/SE25FR Plus/SC40FR



Model		SE25FR	SE25FR Plus	SC40FR
Item				
Max. workpiece diameter	External gear (mm in)	φ250 φ9.8	φ250 φ9.8	φ400 φ15.7
	Internal gear (mm in)	φ250 φ9.8 (φ120 φ4.7 + cutter dia.)	φ250 φ9.8 (φ120 φ4.7 + cutter dia.)	φ400 φ15.7 (φ250 φ9.8 + cutter dia.)
Max. module DP		2.5 10.2	1.25 20.3	4 6.35
Max. gear width (mm in)		60 2.4	60 2.4	115 4.5
Cutter stroke (str./min.)		180~1,800	180~1,800	50~800
Drive system (work table, cutter head)		High-precision worm gear	Direct drive	High-precision worm gear
Number of cuts		1~4	1~4	1~4
Main motor (kW HP)		7.5 10	7.5 10	7.5 10
Controlled axes		5	5	5
Total electric power (kVA)		24	29	31
Machine weight (kg lb)		9,000 19,900	9,500 21,000	10,000 22,100

Gear Machining System

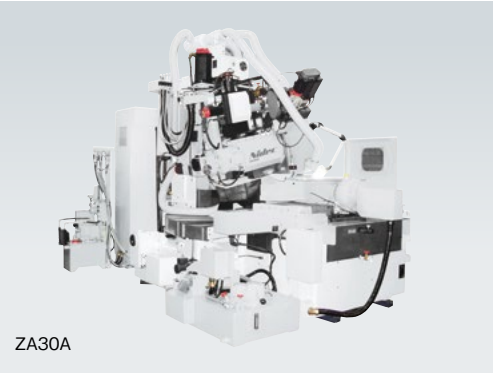
Gear Finishers

Gear Shaving Machines FE Series



Item		Model	FE30A	FEN30A
Max. workpiece diameter		(mm in)	φ310 φ12.2	
Max. cutting module		DP	8 3.18	
Max. face width		(mm in)	150 5.9	100 3.9
Distance between cutter and workpiece centers		(mm in)	105~265 4.1~40.4	
Cutter head longitudinal travel		(mm in)	±30 ±1.2	
Cutter	Max. width	(mm in)	50.8 2.0	
	Bore diameter	(mm in)	φ63.5 φ2.5	
	Speed	(min ⁻¹)	65~500	
Controlled axes			4	
Total electric power		(kVA)	20	16
Machine weight		(kg lb)	7,500 16,600	

Shaving Cutter Grinder



Item		Model	ZA30A
Shaving cutter	Pitch circle diameter	(mm in)	φ150~350 φ5.9~13.8
	Module	DP	1~14 25.5~1.81
	Max. face width	(mm in)	60 2.4 (opt. 70 2.8)
	Max. pressure angle	(deg.)	25
Control	Helix angle	(deg.)	±35
	Cutter spin, table		Simultaneously controlled 2 axes
	Dressing forward/back, up/down		Simultaneously controlled 2 axes
Grinding wheel diameter		(mm in)	φ650~760 φ25.6~29.9
Table feedrate		(mm/min. ipm)	1~9,000 0.04~354.3
Grinding wheel dressing device			Single-point diamond nib
Grinding wheel spindle motor		(kW HP)	1.5 2.0
Floor to work center height		(mm in)	1,040 40.9
Machine weight		(kg lb)	8,500 18,700

Gear Grinding Machines ZE Series



Item	Model	ZE16C	ZE26C	ZE40A
Max. workpiece diameter	(mm in)	φ 160 φ 6.3	φ 260 φ 10.2	φ 400 φ 15.7
Max. module	DP	4 6.35	6 4.23	8 3.18
Grinding wheel diameter x length	(mm in)	φ 275 x 160 φ 10.8 x 6.3		φ 300 x 125 φ 11.8 x 4.9
Grinding wheel shift	(mm in)	235 9.3		200 7.9
Helix angle	(deg.)	± 45		
Max. grinding wheel speed	(min ⁻¹)	8,000		6,000
Max. table speed	(min ⁻¹)	3,000	2,000	600
Radial feed distance	(mm in)	280 11.0		570 22.4
Radial rapid traverse speed	(mm/min, ipm)	10,000 393.7		
Axial rapid traverse speed	(mm./min.)	10,000		
Main motor (Cont.)	(kW HP)	30 40		25 34
Machine weight	(kg lb)	13,000 28,700	15,500 34,200	12,000 26,500

Gear Grinding Machine (Internal / External) ZI20A



Item		Model	ZI20A
Max. workpiece diameter		(mm in)	φ200 φ7.9
Module		DP	1~3 25.4~8.47
Grinding wheel diameter		(mm in)	φ50~120 φ2.0~4.7
Grinding wheel head swivel angle		(deg)	±40
Grinding wheel speed		(min ⁻¹)	15,000
Table diameter		(mm in)	φ200 φ7.9
Max. table speed		(min ⁻¹)	6,000
Spindle motor (Cont.)		(kW HP)	25 34
Controlled axes			8
Machine weight		(kg lb)	12,000 26,500

NIDEC MACHINE TOOL CORPORATION

Skiving Machine

Super Skiving Machine



Item		Model	MSS300
Max. workpiece diameter		(mm in)	φ300 φ11.8
Max. module		DP	4 6.35
Cutter arbor			HSK A100
Table diameter		(mm in)	φ300 φ11.8
Max. spindle speed		(min ⁻¹)	5,000
Spindle motor output		(kW HP)	33 44
Max. table speed		(min ⁻¹)	2,000
Radial feed (X-axis)		(mm in)	350 13.8
Tangential feed (Y-axis)		(mm in)	±225 ±8.9
Axial feed (Z-axis)		(mm in)	250 9.8
Cutter head crossed-axes angle (A-axis)		(deg.)	±30
Machine weight		(kg lb)	20,000 44,100

Cylindrical Grinding Machines

High Production Models P Series



Item		Model	PD23 Angular/Straight	PD32 Angular/Straight
Work capacity	Swing	(mm in)	φ230 φ9.1	φ320 φ12.6
	Center distance	(mm in)	350 13.8	500 19.7 1,000 39.4 1,500 59.1
Wheel	Diameter	(mm in)	A: φ510 φ20.0 P: φ455 φ17.9	φ510 φ20.0 (opt. φ610 φ24.0)
	Width	(mm in)	50 2.0 (opt. 75 3.0)	120 4.7 (opt. 145 5.7)
	Peripheral speed	(m/s ips)	60 2,362.2 (opt. 80 3,149.6)	
Wheel spindle stock	Rapid traverse	(m/min. ipm)	φ 20 φ 787.4	
Head stock	Spindle speed	(min ⁻¹)	8~800	10~500
Dresser			Single-point diamond nib	
Controlled axes			Simultaneously controlled 2 axes	
Motor	Wheel motor output	(kW HP)	5.5 7.5 (opt. 7.5 10)	11 15 (opt. 15 20)
	Spindle motor output	(kW HP)	1.6 2.1	3.0 4.0
Machine weight		(kg lb)	4,500 9,900	7,000 15,500 8,500 18,800 9,000 19,900

Precision Cutting Tools

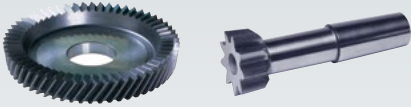
Hobs



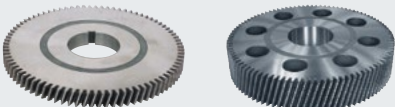
Involute Spline Broaches



Gear Shaper Cutters



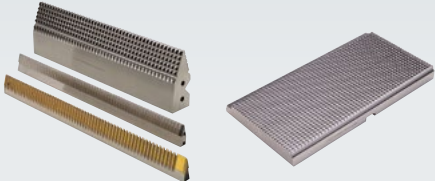
Gear Shaving Cutters



Small Module Cutters



Surface Broaches



Super skiving cutter



Straight Groove Solid Cutter



Pinion Skiving Cutter



Inquiry

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Machine specifications such as dimensions etc., are fixed using SI units including the metric system.
In case data are shown in other units in blue, such as inches, pounds and gallons etc. they are for reference only and the formal data in black supersedes any equivalent data given in blue when fractions caused by conversion become an issue.
Specifications are subject to change without prior notice.
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