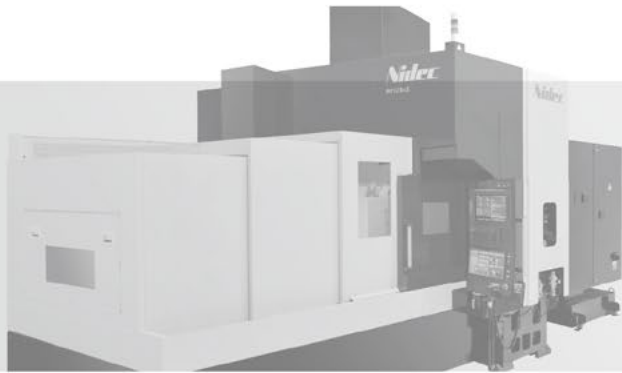


# Nidec

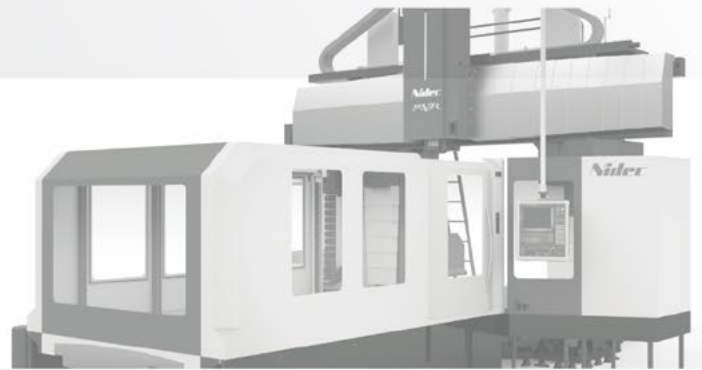
All for dreams



DOUBLE COLUMN TYPE MACHINING CENTER  
FIVE-FACE MILLING MACHINES

# LINEUP

MV-BxII / MVR-Cx / MVR-Ax / MVR-Hx / MVR-Fx / MVR-Dx



**NIDEC MACHINE TOOL CORPORATION**

[www.nidec.com/en/nidec-machinetool/](http://www.nidec.com/en/nidec-machinetool/)

# Renewed for Your Productivity

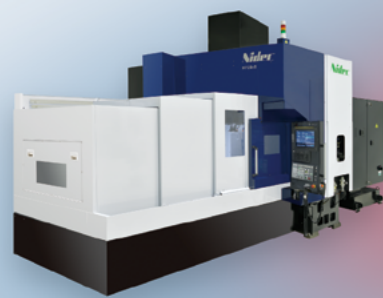
Now with an even broader lineup. Reliable, high-performance machines for

increasing your productivity.

## COST PERFORMANCE

## HIGH PERFORMANCE

The multi-machine offering excellent cost-performance



### MV-BxII

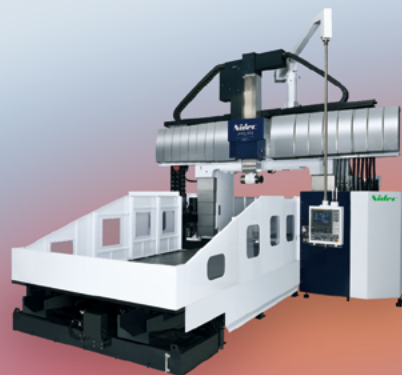
Model	Width(mm)
MV12BxII	1,460



- Can manufacturing parts
- General machined parts
- Industrial machinery parts



Simple and easy to use  
A reliable partner for processing large items



### MVR-Cx

Model	Width(mm)
MVR25Cx	2,050
MVR30Cx	2,550



- Can manufacturing parts (trestle)
- Construction machinery parts (skirt)
- Mold base parts

Standard machines to meet the diverse needs for machining large components



### MVR-Ax

Model	Width(mm)
MVR25Ax	2,050
MVR30Ax	2,550
MVR35Ax	3,250
MVR40Ax	3,750
MVR45Ax	4,250



- Can manufacturing parts (trestle)
- Construction machinery parts (skirt)
- Chambers
- Industrial machinery parts

Do more with Five-face Milling  
Added freedom for machining



### MVR-Hx

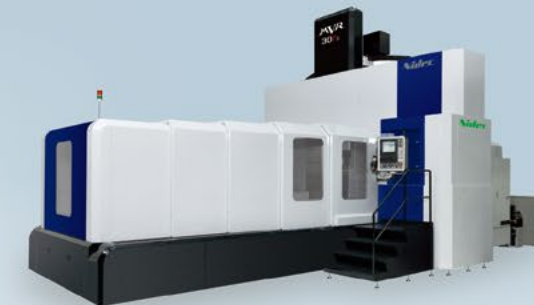
Model	Width(mm)
MVR25Hx	2,050
MVR30Hx	2,550
MVR35Hx	3,250
MVR40Hx	3,750
MVR45Hx	4,250



- Ceramic Products
- Chambers
- Industrial machinery parts
- Press outer dies



“Zero target”  
ZERO steps, ZERO form error and ZERO hand finishing



### MVR-Fx

Model	Width(mm)
MVR30Fx	2,550
MVR35Fx	3,050



- Injection molds/Press dies

Powerful & Fast  
High Power Large Milling Machine

### MVR-Dx

Model	Width(mm)
MVR28/34Dx	2,800
MVR33/39Dx	3,300
MVR38/44Dx	3,800
MVR43/49Dx	4,300
MVR48/54Dx	4,800



- Marine engine block



## Responding to the diverse needs of customers who support "Monozukuri" manufacturing

Manufacturing has entered an era of significant change with the use of digital technologies such as artificial intelligence (AI), the rise and practical use of 3D printers, and the acceleration of globalization. Machine tools are also becoming faster and more precise, while our customers' production and processing needs are changing and diversifying every day. Nidec Machine Tools has expanded its lineup of double-column machining centers and double-column 5-face milling machines centers to meet a broader range of customer needs. This new lineup, with even higher accuracy and performance, will be the optimal partner for anyone who supports manufacturing.

### Manufacturing Capabilities

	MV-BxII	MVR-Cx	MVR-Ax	MVR-Hx	MVR-Fx	MVR-Dx
Can manufacturing of trestles, etc.	Yes	Yes	Yes	Yes	Yes	Yes
Machining of castings i.e. engine blocks and beds for industrial machinery	No	Yes	Yes	Yes	Yes	Yes
Aluminum processing for semiconductor manufacturing equipment, aircraft parts, etc.	No	No	Yes	Yes	Yes	Yes
Dies and Mold/Shape surface processing	No	No	No	Yes	Yes	Yes

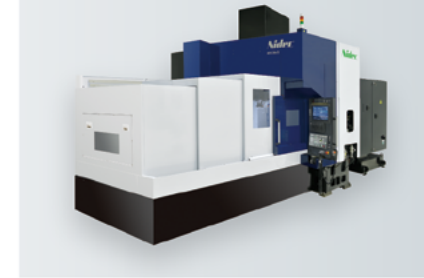
• The photo includes optional equipment. Actual product may vary based on options and specifications chosen.



# Wide range of products to support your needs

The multi-machine offering excellent cost-performance

## MV-BxII



Item	Model	MV12BxII	
Table	Working area	Width (mm in)	1,600 63.0
		Length (mm in)	1,300 51.2
	Loading capacity (kg lb)	3,000 6,600	
Throat clearance between columns (mm in)		1,460 57.5	
Distance from spindle end to table surface (mm in)		200-860 7.9-33.9	
Spindle	Nose Taper (mm in)	BT50	
	Spindle speed (min <sup>-1</sup> )	35 ~ 7,000	
	Spindle motor output (Cont./30min) (kW/HP)	Low 18.5/22 25/30 : High 26/30 35/40	
Tool storage capacity		30 (opt.60)	
Machine weight (kg lb)		19,000 41,000	

## Double-column Type Machining Center/Five-Face Milling Machines by Nidec

The MV-BxII is a compact, best-in-class, double-column Machining Center that meets "The Machining Needs of All Industries". The MVR-Cx is useful in the machining of larger general parts and can easily be installed. The MVR-AX is based on the concept "excellent machining, fast, and easy to operate". The MVR-Hx is compatible with various sizes and materials and offers both accuracy and machining capacity. The MVR-Fx specializes in dies and molds and offers high-precision, high-quality finishing. The MVR-Dx is ideal for heavy-duty machining and even larger workpieces. We offer a wide range of products to match your needs.

Do more with the Five-face Milling Added freedom for machining

## MVR-Hx



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	3,000 118.1	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.)	4,000 157.5 ~ 10,000 393.7 (Opt.)	6,000 236.2 ~ 10,000 393.7 (Opt.)
	Loading capacity (ton/m lb/in)	12/3.0 28,400/118.1 ~ 20/8.0 44,000/315.0 (Opt.)	20/3.0 44,000/181.1 ~ 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 <sup>-1</sup> )	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)					
Tool storage capacity (ATC)		60 (opt. 80, 100, 120, 180)					
Machine weight (kg/Working area mm in)		35,890/3,000 79,200/118.1	39,390/3,000 86,900/118.1	59,340/4,000 130,900/157.5	67,340/4,000 148,500/157.5	104,740/6,000 231,000/236.2	

Simple and easy to use A reliable partner for processing large items

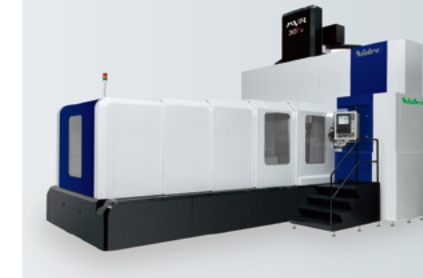
## MVR-Cx



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 <sup>-1</sup> )	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	

"Zero target" ZERO steps, ZERO form error and ZERO hand finishing

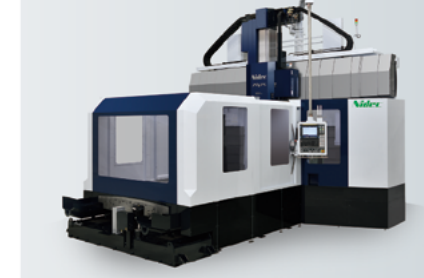
## MVR-Fx



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 <sup>-1</sup> )	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	

Standard machines to meet the diverse needs for machining large components

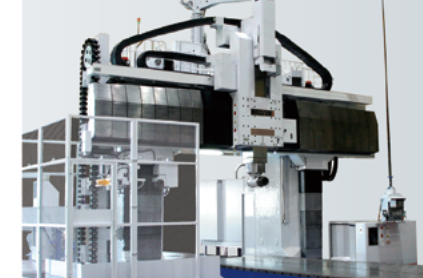
## MVR-Ax



Item	Model	MVR25Ax	MVR30Ax	MVR35Ax	MVR40Ax	MVR45Ax	
Table	Working area	Width (mm in)	1,500 59.1	2,000 78.7	2,500 98.4	3,000 118.1	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.)	4,000 157.5 ~ 10,000 393.7 (Opt.)	6,000 236.2 ~ 10,000 393.7 (Opt.)
	Loading capacity (ton/m lb/in)	12/3.0 28,400/118.1 ~ 20/8.0 44,000/315.0 (Opt.)	20/3.0 44,000/181.1 ~ 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 <sup>-1</sup> )	20 ~ 6,000 (opt. 40 ~ 10,000, 11 ~ 4,000)					
	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)					
Tool storage capacity (ATC)		60 (opt. 80, 100, 120, 180)					
Machine weight (kg/Working area mm in)		35,890/3,000 79,200/118.1	39,390/3,000 86,900/118.1	59,340/4,000 130,900/157.5	67,340/4,000 148,500/157.5	104,740/6,000 231,000/236.2	

Powerful & Fast High Power Large Milling Machine

## MVR-Dx



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)	5,000 196.9 (opt. 6,000 236.2, 8,000 315.0)	5,000 196.9 (opt. 6,000 236.2, 8,000 315.0)	5,000 196.9 (opt. 6,000 236.2, 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, 35/6.0 79,400/236.2, 48/8.0 115,900/315.0)	35/5.0 77,100/196.9 (opt. 42/6.0 92,600/236.2, 56/8.0 123,500/315.0)	35/5.0 77,100/196.9 (opt. 42/6.0 92,600/236.2, 56/8.0 123,500/315.0)	35/5.0 77,100/196.9 (opt. 42/6.0 92,600/236.2, 56/8.0 123,500/315.0)	35/5.0 77,100/196.9 (opt. 42/6.0 92,600/236.2, 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)	3,050 120.1 (opt. 2,050 80.7, 2,550 100.4)	3,050 120.1 (opt. 3,550 140.0, 4,050 159.4)	3,050 120.1 (opt. 3,550 140.0, 4,050 159.4)	3,050 120.1 (opt. 3,550 140.0, 4,050 159.4)	
Ram	Size (mm in)	400 15.7 sq.					
	Spindle speed (min <sup>-1</sup> )	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	110,000/4,000 242,800/157.5	118,000/5,000 260,200/196.9	121,000/5,000 266,800/196.9	136,400/6,000 300,900/236.2	

A full range of excellent functions for flexible machining. Full lineup from compact machines to large, high-performance machines.



**Five-face Milling**  
Equipped with right angle head. Machining five surfaces other than the bottom of the workpiece



**Nidec Navi**  
Easy-to-understand original NC screen for efficient operation.



**Internal Spindle Cooling**  
Cooling function that prevents thermal displacement of the spindle and maintains machining accuracy.



**Thermostabilizer**  
This column reduces the effects of environmental temperature changes and maintains geometric tolerances.



**Suitable for High-precision Machining**  
Equipped with a spindle suitable for high-speed rotation and high-precision machining, such as mold shaping.



**Suitable for heavy-duty machining**  
Equipped with a high-power, high-torque spindle that achieves high productivity.

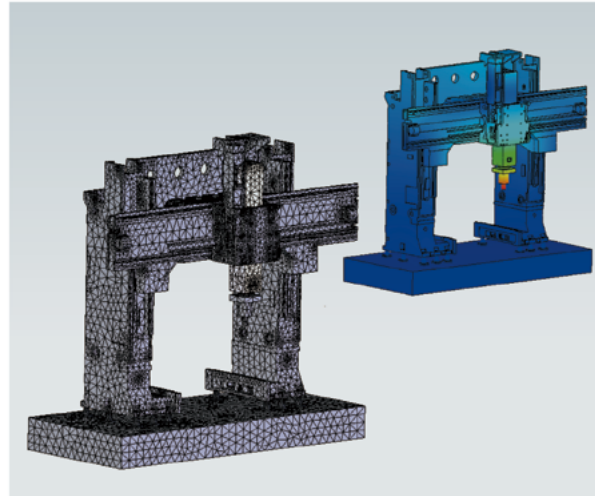


**DIASCOPE**  
Remote support included as standard feature. See operating status at a glance.

●The photo includes optional equipment. Actual product may vary based on options and specifications chosen.



# Rigidity & Accuracy



## High Rigidity Structure

The rigid main structure is resistant to cutting reaction forces and maintains stable machining quality.

- 3D FEM analysis to determine the appropriate rib shape
- Provide sufficient thickness and cross-sectional area to the saddle, crossrail, and bed.
- More castings with high damping properties used in structure.



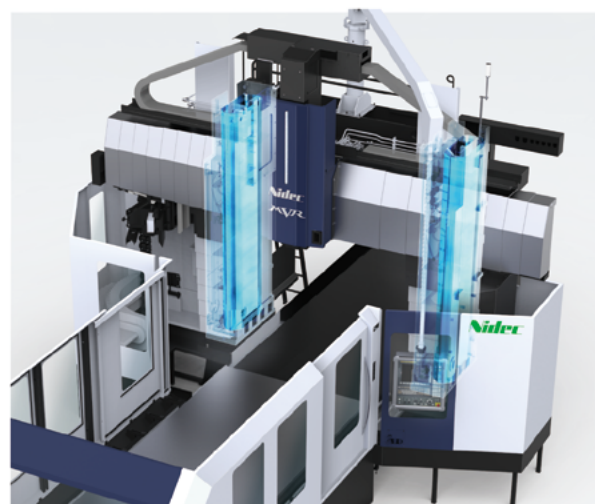
## Spindle Cooling Mechanism

By reducing the heat generated during spindle rotation, thermal displacement during high-speed rotation and continuous operation is reduced. The internal spindle cooling system cools and balances the temperature of the bearing inner and outer rings. This increases the preload in the bearing, maintaining rigidity and for reduced spindle vibration.

**Spindle outer cylinder cooling** MV-BxII/MVR-Cx/MVR-Ax/MVR-Dx

**Spindle outer cylinder cooling + spindle core cooling**<sup>\*1</sup> MVR-Hx/MVR-Fx<sup>\*2</sup>

<sup>\*1</sup> Spindle core cooling ...Cool the spindle from the inside  
<sup>\*2</sup> 20,000min<sup>-1</sup> Indexing 5-axis head(Opt.)is equipped with spindle centering cooling



## Thermal Balance Structure

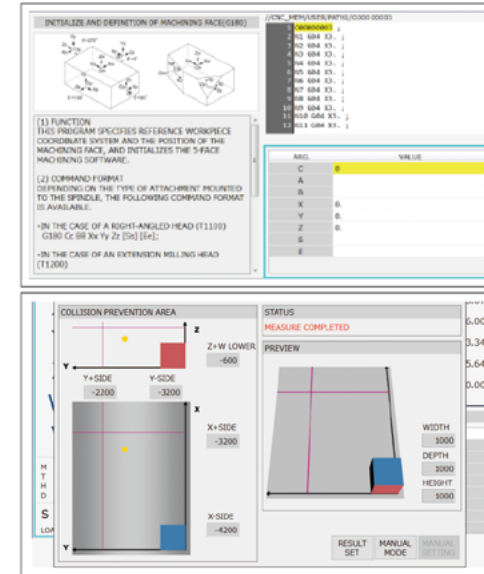
In addition to physical rigidity, high "thermal rigidity is also required. The thermal capacity is more significant than a standard cast iron column, while the thermal conductivity is minimal. The mechanism is stable and unaffected by temperature changes in the environment at different times of the day, contributing to high-precision machining.

- High rigidity symmetrical structure to prevent thermal deformation of the machine body
- Thermo-stabilized column with temperature control medium enclosed in the "Thermostabilizer column": MVR-Hx / MVR-Fx

# Usability

## Improved operability with Nidec Navi\*

\*Nidec Navi is our unique user interface.



## AICC Processing Mode Setting Screen

- Appropriate acceleration/deceleration parameters can be easily set according to the desired machining accuracy/speed and workpiece weight. Can automatically estimate the workpiece weight with a simple button operation. <sup>\*Available as AICC option for MVRHx</sup>

## Visual Guidance

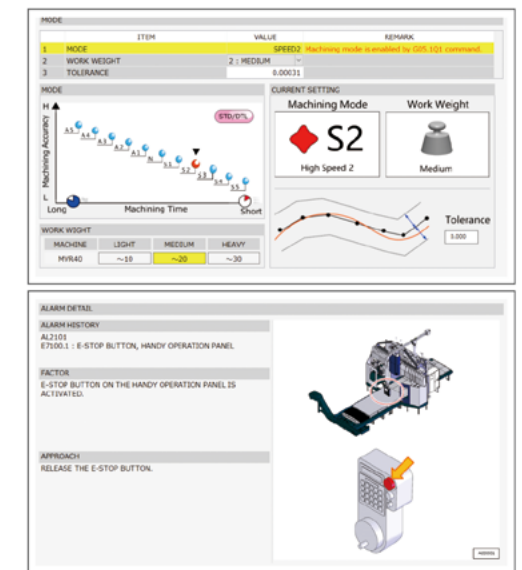
- In the event of an alarm, a 3D visual display will show how to respond. Will guide you through the operation procedure and provide support for quick recovery.

## Machining Program Creation Support

- The manual program is completed by simply entering arguments while watching the explanation on the screen. Even complex processing can be done with ease.

## Easy Collision Prevention

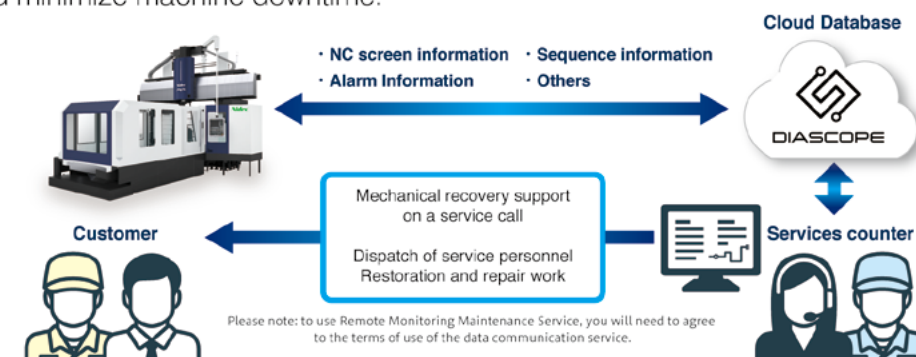
- When a tool intrudes into a particular area around a workpiece during manual operation, the alarm will stop to prevent collision. <sup>\*Available on MVR-Cx (Opt.), MVR-Ax (Std.), MVR-Hx (Std.)</sup>



# Maintenance

## DIASCOPE Remote Monitoring Maintenance Service as standard feature

- Operates on DIASCOPE, our original IoT platform  
 When customers call the support center, the team remotely accesses the machine and immediately monitors the machine's status. Based on the monitored information, we will guide you to the appropriate solution and minimize machine downtime.



• The photo includes optional equipment. Actual product may vary based on options and specifications chosen.



Inquiry

## NIDEC MACHINE TOOL CORPORATION

[www.nidec.com/en/nidec-machinetool/](http://www.nidec.com/en/nidec-machinetool/)



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E-mail: [nsc-koki@nidec-shimpo.com.cn](mailto:nsc-koki@nidec-shimpo.com.cn)

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**NIDEC-SHIMPO INDIA MANUFACTURING PRIVATE LIMITED**  
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**NIDEC DRIVE TECHNOLOGY DE MEXICO, S. de R.L. de C.V.**  
Parque Industrial NAVEX PARK, Callejón de la Evangelización #106,  
Cal. Santa Maria Magdalena, Querétaro, Qro. 76137, México  
Phone: +52-442-242-3351

**Nidec-Shimpo do Brazil Imp., Exp. e Com. de Equip. Ltda.**  
Estrada General Motors, 652 – Galpão 11 &12, Indaiatuba - SP  
13347-500 Brazil  
Phone: +55-11-5071-0015

**Nidec Drive Technology Europe GmbH**  
Ludwigstrasse 9, 80539 Munich, Germany  
Phone: +49-89-125030-780 Facsimile: +49-89-125030-781

### Manufacturing bases

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1961 Sullivan Drive, Harrison, MI 48625 U.S.A.  
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<https://federalbroach.com/>

**Southeast Broach Company - South Carolina LLC**  
431 S Buncombe Rd Greer, SC 29650 U.S.A.  
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<https://www.sebroach.com/index-2.html>

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**Nidec Machine Tool (Changshu) Corporation**  
181 Huangpujiang Road,  
Changshu New & Hi-tech Industrial Development Zone,  
Changshu City, Jiangsu Province 215500, P.R. China  
Phone: +86-512-5230-3030



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.  
The export of this product is subject to Japanese Governmental approval.