

# NISHIJIMAX<sup>®</sup>



**NHC HIGH PERFORMANCE  
CIRCULAR SAW SYSTEMS**

# PAT MOONEY SAWS HELPS COMPANIES MAXIMIZE SAWING PERFORMANCE THROUGH INNOVATION, APPLICATION INSIGHT, AND DEDICATED TECHNICAL SUPPORT.

Pat Mooney Saws and Nishijimax revolutionized the production metal sawing market in 1996 with the introduction of the NHC High-Performance Circular Saw System. These automatic saw systems, each with fully integrated auto bar loading and cut part sorting, were quickly adopted for 24-hour cut off operations. NHC's reliable performance and trouble-free reputation rapidly spread within the automotive forging industry. Today, the Nishijimax NHC High-Performance Circular Saws are installed in more than 500 manufacturing facilities across North America.

## PAT MOONEY SAWS PROVIDES SALES, SERVICE AND TECHNICAL SUPPORT TO NORTH AMERICA

Pat Mooney Saws is your partner for high-speed production sawing. Sectors served include automotive, oil and gas, energy, agriculture, fasteners, construction, medical device, service centers, and fabrication manufacturers. We also stock wear parts and Kanefusa thin kerf cold saw blades designed to work with your Nishijimax machine. There is always someone available to answer your technical questions to get you back up and running.

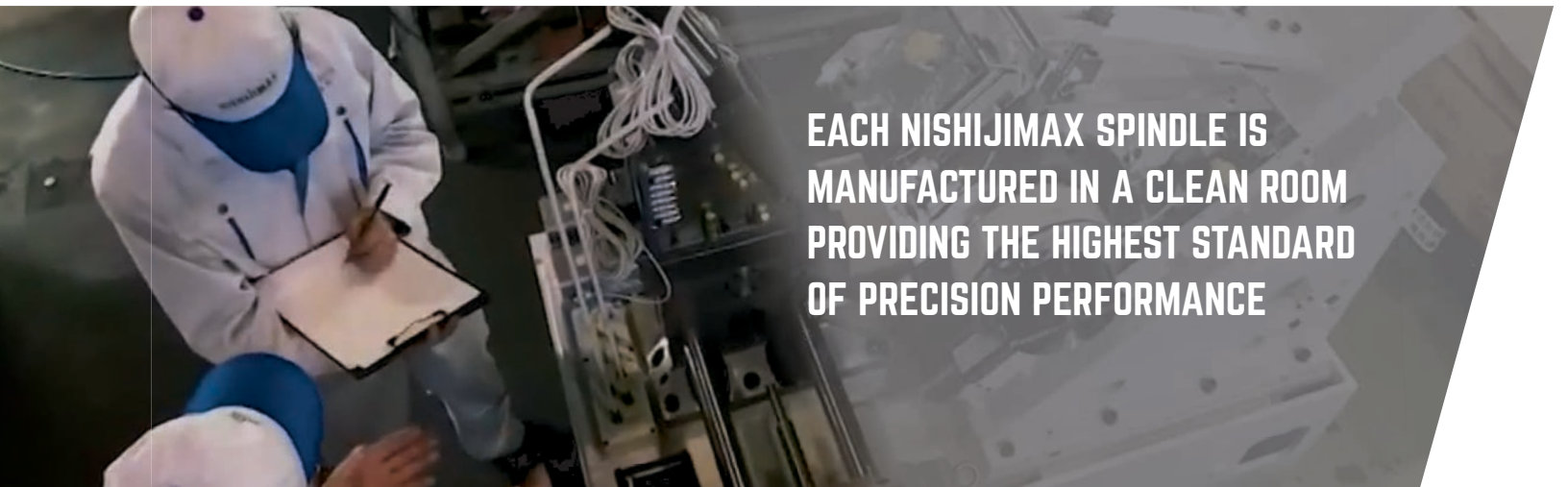
## INDUSTRY WIDE USAGE

The concept is based upon more than 50 years of experience building high-speed machine transfer lines and machining centers. Today, almost every light car and truck manufactured in North America has parts that were first cut on a Nishijimax saw.

**NISHIJIMAX**® Engineered and Built in Japan

## DEDICATED TECHNICAL SUPPORT

- /// Machine, blade and spare part inventory in our Addison, IL plant
- /// Field Service Engineers that are able to repair, maintain and provide PLC modifications
- /// Fabrication shop for load tables and exit systems
- /// Tech center for test cutting and customer training
- /// Technical support via video and telephone

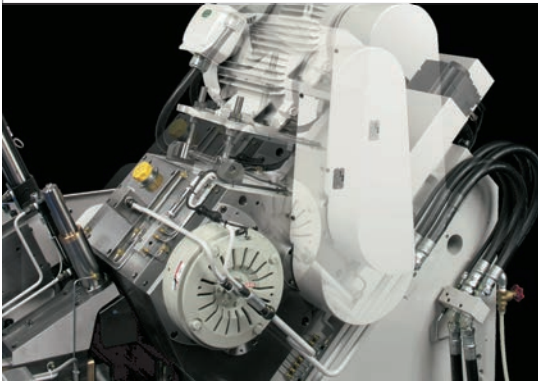


**EACH NISHIJIMAX SPINDLE IS MANUFACTURED IN A CLEAN ROOM PROVIDING THE HIGHEST STANDARD OF PRECISION PERFORMANCE**



**EASY TO SET UP AND OPERATE**

### SAW HEAD ASSEMBLY

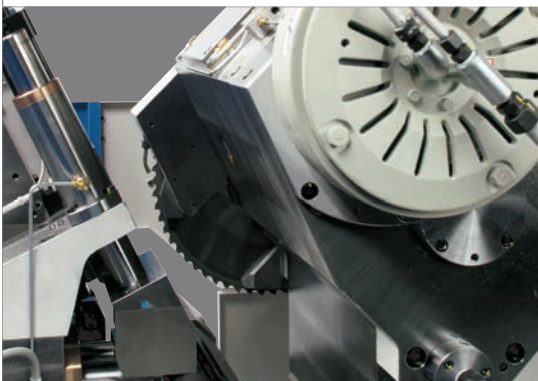


- ▮ 45 Degree Z-axis slant bed cutting platform allows for longer blade life and higher feed rates
- ▮ Controlled by a precision ball screw driven by an AC servo motor for total control and support of the saw blade to deliver high speed sawing rates with a low cost per cut
- ▮ The precision spindle guarantees a precise feed rate while minimizing vibrations
- ▮ An induction motor drives the saw blade spindle via a reduction gearbox with RPM controlled by a FREQUOL inverter drive for constant torque



Control the machine via a Mitsubishi Q Series PLC HMI, allowing easy set up and troubleshooting guides

### MATERIAL POSITIONING



- ▮ Hydraulic horizontal and vertical clamping and material index X-axis
- ▮ The AC servo motor and precision ball screw travels on hardened round rails
- ▮ Bar advancement is grip and carry with a up-middle-down position allowing for more flexible movement of bars that may be bent

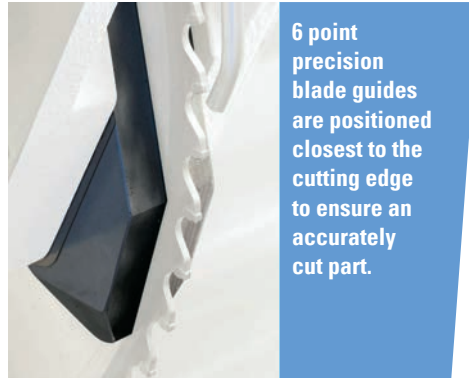
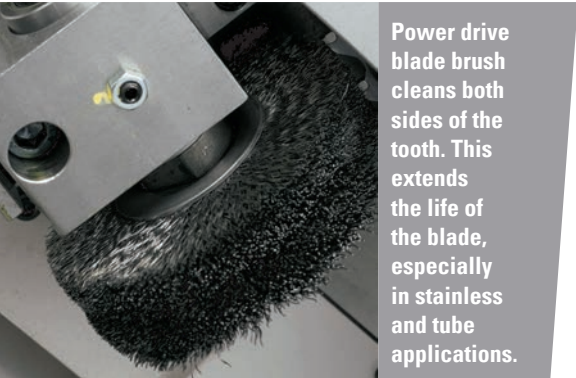


|                              | NHC-80NC                          | NHC-110NC                         | NHC-130NC                         |
|------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <b>ROUND MINIMUM</b>         | 0.393" (10 mm)                    | 0.590" (15 mm)                    | 0.590" (15 mm)                    |
| <b>ROUND MAXIMUM</b>         | <b>3.149" (80 mm)</b>             | <b>4.33" (110 mm)</b>             | <b>5.118" (130 mm)</b>            |
| <b>SQUARE MINIMUM</b>        | 0.393" (10 mm)                    | 0.590" (15 mm)                    | 0.590" (15 mm)                    |
| <b>SQUARE MAXIMUM</b>        | 2.362" (60 mm)                    | 2.91" (75 mm)                     | 3.54" (90 mm)                     |
| <b>CUTTING AXIS</b>          | 45 Degree Slant Type              | 45 Degree Slant Type              | 45 Degree Slant Type              |
| <b>Z-AXIS METHOD</b>         | via AC Servo Motor/Ball Screw     | via AC Servo Motor/Ball Screw     | via AC Servo Motor/Ball Screw     |
| <b>SAW MOTOR POWER</b>       | 10.5 HP (7.5 kW)                  | 21 HP (15 kW)                     | 21 HP (15 kW)                     |
| <b>SAW BLADE RPM</b>         | 70-200                            | 50-160                            | 35-120                            |
| <b>SAW BLADE DIAMETER</b>    | 10.75" (285/300 mm)               | 14.12" (360/370 mm)               | 16.53" (420 mm)                   |
| <b>SAW BLADE THICKNESS</b>   | 0.078" (2 mm)                     | 0.105" (2.5 mm)                   | 0.106" (2.7 mm)                   |
| <b>X-AXIS SIZER</b>          | via AC Servo Motor/Ball Screw     | via AC Servo Motor/Ball Screw     | via AC Servo Motor/Ball Screw     |
| <b>CUTTING LENGTH-MIN</b>    | 0.393" (10 mm)                    | 0.393" (10 mm)                    | 0.393" (10 mm)                    |
| <b>CUTTING LENGTH-MAX</b>    | 236"+ (6000 mm+)                  | 236"+ (6000 mm+)                  | 236"+ (6000 mm+)                  |
| <b>SINGLE INDEX - X-AXIS</b> | 23.622" (600 mm)                  | 33.46" (850 mm)                   | 33.46" (850 mm)                   |
| <b>INDEX SPEED - X-AXIS</b>  | 78 ft/min (24 m/min)              | 78 ft/min (24 m/min)              | 78 ft/min (24 m/min)              |
| <b>TRIM CUT LENGTH-MIN</b>   | 0.393" (10 mm)                    | 0.393" (10 mm)                    | 0.393" (10 mm)                    |
| <b>TRIM CUT LENGTH-MAX</b>   | 4" (100 mm)                       | 4" (100 mm)                       | 4" (100 mm)                       |
| <b>REMNANT LENGTH-STD</b>    | 2.36" (60 mm)                     | 3.37" (85 mm)                     | 3.37" (85 mm)                     |
| <b>REMNANT LENGTH-OPT</b>    | 0.75" (20 mm)                     | 1.25" (32 mm)                     | 1.25" (32 mm)                     |
| <b>CLAMP METHOD-JIG</b>      | Hydraulic Horizontal and Vertical | Hydraulic Horizontal and Vertical | Hydraulic Horizontal and Vertical |
| <b>CLAMP METHOD-SIZER</b>    | Hydraulic Horizontal and Vertical | Hydraulic Horizontal and Vertical | Hydraulic Horizontal and Vertical |
| <b>MACHINE WEIGHT</b>        | 6,600 lb (300 kg)                 | 11,000 lb (6000 kg)               | 14,000 lb (6300 kg)               |
| <b>LENGTH OF BARS/PIPES</b>  | 12 - 24' (3.6 - 6.1 m)            | 12 - 24' (3.6 - 6.1 m)            | 12 - 24' (3.6 - 6.1 m)            |
| <b>OPTIONAL LOAD TABLES</b>  | 40' (12 m)                        | 40' (12 m)                        | 40' (12 m)                        |



| NHC-160NC                         | NHC-180NC /200NC                  | NHC-230NC                         | NHC-280NC                         |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 1" (25 mm)                        | 2" (50 mm)                        | 2.76" (70 mm)                     | 3.54" (90 mm)                     |
| <b>6.29" (160 mm)</b>             | <b>7" (180 mm)/8" (205 mm)</b>    | <b>9.06" (230 mm)</b>             | <b>11.02" (280 mm)</b>            |
| 1" (25 mm)                        | 2" (50 mm)                        | 2.76" (70 mm)                     | 3.54" (90 mm)                     |
| 4.3" (110 mm)                     | 7" (180 mm)                       | 6.3" (160 mm)                     | 7.87" (200 mm)                    |
| 45 Degree Slant Type              | 45 Degree Slant Type              | 45 Degree Slant Type              | 35 Degree Slant Type              |
| via AC Servo Motor/Ball Screw     | via AC Servo Motor/Ball Screw     | via AC Servo Motor/Ball Screw     | via AC Servo Motor/Ball Screw     |
| 21 HP (15 kW)                     | 21 HP (15 kW) /26 HP              | 50 HP (37 kW)                     | 60 HP (45 kW)                     |
| 32-115                            | 28-90                             | 20-70                             | 15-60                             |
| 18" (460/470 mm)                  | 22.05" (560 mm) /(660 mm)         | 29.53" (750 mm)                   | 35.83" (910 mm)                   |
| 0.106" (2.7 mm)                   | 0.118" (3 mm)                     | 0.15" (3.8 mm)                    | 0.2" (5.2 mm)                     |
| via AC Servo Motor/Ball Screw     | via AC Servo Motor/Ball Screw     | via AC Servo Motor/Ball Screw     | via AC Servo Motor/Ball Screw     |
| 0.590" (15 mm)                    | 0.590" (15 mm)                    | 1.18" (30 mm)                     | 1.18" (30 mm)                     |
| 236"+ (6000 mm+)                  | 236"+ (6000 mm+)                  | 236"+ (6000 mm+)                  | 236"+ (6000 mm+)                  |
| 19.68" (500 mm)                   | 19.68" (500 mm)                   | 17.72" (450 mm)                   | 17.72" (450 mm)                   |
| 33 ft/min (10 m/min)              | 33 ft/min (10 m/min)              | 33 ft/min (10 m/min)              | 33 ft/min (10 m/min)              |
| 0.590" (15 mm)                    | 0.590" (15 mm)                    | 1.18" (30 mm)                     | 1.18" (30 mm)                     |
| 4" (100 mm)                       | 4" (100 mm)                       | 4.72" (120 mm)                    | 4.72" (120 mm)                    |
| 3.37" (85 mm)                     | 3.37" (85 mm)                     | 4.33" (110 mm)                    | 4.53" (115 mm)                    |
| 2.36" (60 mm)                     |                                   |                                   |                                   |
| Hydraulic Horizontal and Vertical | Hydraulic Horizontal and Vertical | Hydraulic Horizontal and Vertical | Hydraulic Horizontal and Vertical |
| Hydraulic Horizontal and Vertical | Hydraulic Horizontal and Vertical | Hydraulic Horizontal and Vertical | Hydraulic Horizontal and Vertical |
| 15,000 lb (6500 kg)               | 15,432 lb (7000 kg)               | 33,069 lb (15000 kg)              | 37,479 lb (17000 kg)              |
| 12 - 24' (3.6 - 6.1 m)            | 12 - 24' (3.6 - 6.1 m)            | 12 - 24' (3.6 - 6.1 m)            | 12 - 24' (3.6 - 6.1 m)            |
| 40' (12 m)                        | 40' (12 m)                        | 40' (12 m)                        | 40' (12 m)                        |

## SUPERIOR SAW BLADE LIFE



## CUSTOMIZED SOLUTIONS TO MAXIMIZE PERFORMANCE

### Next-step operations made easy

Our in-house design and fabrication shop allows us to build bundle racks, load tables, and offload conveyors with robotic handling to make the most of your material flow. Each Nishijimax machine has

these next-step operations already embedded into the interface. So whether you need to combine operations or simply need to automate your production line, Pat Mooney Saws and Nishijimax makes it easy.





## LARGE INVENTORY OF SAW BLADES

Pat Mooney Saws is an innovator in the saw blade world providing circular saw blades with proper grinds and maximum blade life for your application.

We teamed up with Kanefusa to provide the first throwaway circular saw blades in North America. Kanefusa continues to develop new tooth geometries and tooth tips to improve cutting rates. Their philosophy of 'quality and consistency every time' allows the customer to rely on their integrity and quality, saw blade after saw blade. Don't forget Supralube mist oil for best performance of the saw blades. Pat Mooney Saws always has a large inventory of blades, lube and spare parts to keep your machines up and running.



## COMPREHENSIVE TECHNICAL SERVICE

**PAT MOONEY SAWS FACTORY-TRAINED SERVICE ENGINEERS ARE KNOWLEDGEABLE AND WILL KEEP YOUR MACHINES UP AND RUNNING**



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## OUR 47,000 SQUARE FOOT HEADQUARTERS IN ADDISON, ILLINOIS

- Sales office
- Machine showroom
- Technical support and training facility
- Warehouse for machines, blades and spare parts
- Fabrication and assembly shop for material handling equipment



**NISHIJIMAX**

Schedule your LIVE virtual demo today!  
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800-323-7503 | 630-543-6222