Now Methods brings you KIWA Japan
The industry’s most expandable horizontal machining centers

With KIWA’s exclusive in-the-field expandable tool and pallet technology, feature-rich package and affordable price, the profits of horizontal machining are now easily within your reach:

- **Expandable** – Easily expands as your business grows, from a 2 pallet machine with 120 tools, to a 6 or 8 pallet machine with 220 tools.

- **Scalable** – The KH-45 features a 400 mm pallet and has an ample work envelope of 29.5” dia. x 39.4” h.

- **Valuable** – Japanese quality, loaded with features, speed, accuracy and rigidity plus reduced set-up time.

Grow Vertically
The affordable, high performance solution

The largest travel and work envelope in the industry means more working versatility for you.

- 25.2" x 24" x 26.8"  
  [640 x 610 x 680 mm]

- 4th axis as standard

- Largest table load:  
  1,100 lbs [500 kg]

- Stepped base and column casting design reduces column mass and enhances rigidity

Value

Box type bed for high rigidity, accuracy  
Extremely stable, accurate pallet clamping
With 1G+ as standard on all axes, KIWA machines are designed for speed and agility which reduces cycle times.

- 2,362 ipm rapids in all axes
- 12,000 rpm spindle, BT40/CAT40 spindle taper
- Tool-to-tool 0.9 seconds
- Chip-to-chip 2.8 seconds
Designed with the Operator in Mind

From easy workpiece access, to Posi-lock pallet clamping, flexible guide arm for fixturing to unique chip disposal options, KIWA horizontals exemplify intelligent machine design.

- Easy operator access to spindle, pallets, fixtures, workpieces and for maintenance
- Swing arm control box moves to the operator’s most comfortable position

Wide 25″ [635 mm] set up door
32″ [813 mm] operator door
The Beauty of the KIWA Design

Flexibility to change with your manufacturing needs makes the KIWA KH-45 a smart investment. For example, you can simply invest in a machine with a standard 60ATC. Or you can purchase a 120ATC machine that expands to 220 tools. Or that expands from 2 pallets to 6 or 8. Plus, tool or pallet expansion can be installed in your shop in one and a half day’s time!
Quickly expand from 2APC to 6 or 8 APC in the field

Max Workspace

- 6APC: 29.5" dia. x 35.4" h [750 x 900 mm]
- 8APC: 25.6" dia. x 35.4" h [650 x 900 mm]
- Chips and coolant in the pallet pool return to the machine side coolant tank, keeping the pallet pool a clean zone.
- Can also be interfaced with a larger pallet stacker system (Fastems, etc.) if required.
With a Fanuc Control System and reliable accuracies, the KIWA KH-45 gives you the power, familiarity and ease of use to machine with confidence.

- Positioning: .0001" and Repeatability: .000039"
- Table Indexing Accuracy: 10 Arc Seconds
- Pallet Change Repeatability: .0001"

Above are actual measurement examples.
Creative Options

KIWA has added extra options for chip disposal, clamping and more to give you enhanced manufacturing flexibility.

Flexible Guide Arm

- For clamping/unclamping of pneumatic/hydraulic fixtures
- Allows free movement of the rotary table and protects hoses and cables inside
- Can accommodate a large workpiece up to 29.5" dia. x 39.4" h [750 x 1,000 mm]
- Enables large, sophisticated fixtures if needed

Chip Disposal

- Clever, efficient chip disposal design feeds front (standard) or side disposal via belt conveyor, scraper or optional spiral auger kits

Optional 500 mm pallets

An outside chip conveyor can be installed at either the front or rear side.

Optional spiral chip augers on both sides of the Z-axis help chip disposal.

Versatile
Machine design emphasizes maximum space utilization, rigidity, speed, and tool and pallet expandability, all for an affordable price. The KIWA KH-45 offers unparalleled performance-to-value in horizontal machining.

- APC Expansion in one and a half day's time
- ATC Expandability
- 1G Acceleration
- 4th Axis as standard
- Fanuc Control System
- Flexible Guide Arm (option)
- Unique Chip Disposal as standard
- Posi-lock Clamping
Specifications

KIWA KH-45 is offered in two basic models and is designed to incorporate various options for automated production, allowing you to match a machine to your requirements. Optional configurations are also available.

**KH-45 60**
- 60 Tool ATC
- 1G Acceleration
- 2,362 IPM Rapids
- PC2 APC
- Fanuc 31i Control

**KH-45 120**
- 120 Tool ATC (expandable)
- 1G Acceleration
- 2,362 IPM Rapids
- PC2 APC (expandable)
- Fanuc 31i Control

### Specifications KH-45 w/FANUC 31i-A

<table>
<thead>
<tr>
<th>Specifications</th>
<th>KH-45 w/FANUC 31i-A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRAVEL</strong></td>
<td></td>
</tr>
<tr>
<td>X-axis, Y-axis, Z-axis mm [inch]</td>
<td>640 [25.2&quot;], 610 [24.0&quot;], 680 [26.8&quot;]</td>
</tr>
<tr>
<td>Spindle center to pallet surface mm [inch]</td>
<td>50 - 660 [2.0&quot; - 26.0&quot;]</td>
</tr>
<tr>
<td>Spindle nose to pallet center mm [inch]</td>
<td>100 - 180 [3.9&quot; - 30.7&quot;]</td>
</tr>
<tr>
<td>Pallet top height (from the floor) mm [inch]</td>
<td>1,069 [42.1&quot;]</td>
</tr>
<tr>
<td>Optional configuration</td>
<td>500 x 500 [19.7&quot; x 19.7&quot;]</td>
</tr>
<tr>
<td><strong>TABLE</strong></td>
<td></td>
</tr>
<tr>
<td>Table size (x 2pallets) mm [inch]</td>
<td>400 x 400 [15.7&quot; x 15.7&quot;]</td>
</tr>
<tr>
<td>Workpiece max. size mm [inch]</td>
<td>Optional 500 x 500 [19.7&quot; x 19.7&quot;]</td>
</tr>
<tr>
<td>Max. load kg [lbs]</td>
<td>900 [1,100]</td>
</tr>
<tr>
<td>Configuration</td>
<td>25-M16 P=80mm [3.1&quot;]</td>
</tr>
<tr>
<td>Min. indexing degree</td>
<td>0.001</td>
</tr>
<tr>
<td>Indexing speed sec / 90 degrees</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>SPINDLE</strong></td>
<td></td>
</tr>
<tr>
<td>Spindle speed min⁻¹</td>
<td>12,000 direct drive, Optional 15,000 direct drive</td>
</tr>
<tr>
<td>Spindle rated torque Nm</td>
<td>200 (2min.) / 150 (15min.)</td>
</tr>
<tr>
<td>Spindle taper ISO 7/24 Taper</td>
<td>Nr. 40</td>
</tr>
<tr>
<td>Through spindle coolant MPa [psi]</td>
<td>7.0 [1,000]</td>
</tr>
<tr>
<td><strong>FEED</strong></td>
<td></td>
</tr>
<tr>
<td>Rapid feed (X/Y/Z) mm/min [ipm]</td>
<td>60,000 [2,362]</td>
</tr>
<tr>
<td>Cutting feed (X/Y/Z) mm/min [ipm]</td>
<td>30,000 [1,181]</td>
</tr>
<tr>
<td>Table rotating speed min⁻¹</td>
<td>33.3</td>
</tr>
<tr>
<td>Acceleration (X/Y/Z) G</td>
<td>1.0 / 1.0 / 1.0</td>
</tr>
<tr>
<td><strong>ATC</strong></td>
<td></td>
</tr>
<tr>
<td>Type of tool shank</td>
<td>BT40/CAT40</td>
</tr>
<tr>
<td>Number of tools</td>
<td>60, Optional 120 / 220</td>
</tr>
<tr>
<td>Max. tool diameter mm [inch]</td>
<td>270 [10.6&quot;] / 214 [8.4&quot;] for 60ATC</td>
</tr>
<tr>
<td>Max. tool length mm [inch]</td>
<td>400 [15.7&quot;], Optional 450 [17.7&quot;]</td>
</tr>
<tr>
<td>Max. tool weight kg [lbs]</td>
<td>8 [17.6]</td>
</tr>
<tr>
<td>Tool selection system</td>
<td>Random for 60ATC</td>
</tr>
<tr>
<td>Tool to tool sec.</td>
<td>0.9 (1.7; Heavy tool programmable)</td>
</tr>
<tr>
<td>Chip to chip sec.</td>
<td>2.8 (3.6; Heavy tool programmable)</td>
</tr>
<tr>
<td><strong>APC</strong></td>
<td></td>
</tr>
<tr>
<td>Number of pallets</td>
<td>2, Optional 6 / 8</td>
</tr>
<tr>
<td>Pallet change system</td>
<td>Rotation</td>
</tr>
<tr>
<td>APC exchange time sec.</td>
<td>6</td>
</tr>
<tr>
<td><strong>MOTOR</strong></td>
<td></td>
</tr>
<tr>
<td>Spindle motor kW [HP]</td>
<td>22 [16.5; 30 / 20]</td>
</tr>
<tr>
<td>Feed axes motors (X/Y/Z/B) kW [HP]</td>
<td>4.5 / 4.5 / 4.5 / 2.7 [6.0 / 6.0 / 6.0 / 3.6]</td>
</tr>
<tr>
<td>Lubrication pump motor kW [HP]</td>
<td>23 [0.03]</td>
</tr>
<tr>
<td>Coolant pumps W [HP]</td>
<td>600 [0.8] x 3pc</td>
</tr>
<tr>
<td>Hydraulic pump kW [HP]</td>
<td>2.2 [2.9]</td>
</tr>
<tr>
<td><strong>SUPPLY</strong></td>
<td></td>
</tr>
<tr>
<td>Electric voltage V / 50 or 60Hz</td>
<td>200-230</td>
</tr>
<tr>
<td>Electric power supply KVA</td>
<td>50</td>
</tr>
<tr>
<td>Air pressure Mpa [psi]</td>
<td>0.4 [58]</td>
</tr>
<tr>
<td>Air volume liters [gal] / min.</td>
<td>360 [95]</td>
</tr>
<tr>
<td><strong>TANK</strong></td>
<td></td>
</tr>
<tr>
<td>Hydraulic unit tank liters [gal]</td>
<td>20 [5.3]</td>
</tr>
<tr>
<td>Coolant tank liters [gal]</td>
<td>550 [145.3]</td>
</tr>
<tr>
<td>Lubrication unit tank liters [gal]</td>
<td>1.8 [0.5]</td>
</tr>
<tr>
<td><strong>SIZE</strong></td>
<td></td>
</tr>
<tr>
<td>Floor size mm [inch]</td>
<td>2APC+60ATC: 2,398 x 4,539 [94.4&quot; x 178.7&quot;], 2APC+120ATC: 2,541 x 4,539 [100.0&quot; x 178.7&quot;]</td>
</tr>
<tr>
<td>Machine height mm [inch]</td>
<td>60ATC: 2,766 [108.9&quot;], 120ATC: 2,584 [101.7&quot;]</td>
</tr>
<tr>
<td>Machine weight kg [lbs]</td>
<td>2APC+60ATC: 9,200 [20,240], 2APC+120ATC: 9,950 [21,890]</td>
</tr>
</tbody>
</table>

**Machine Options**
- Overhead hydraulic arms
- Linear scale
- Inside chip conveyor (spiral type)
- Automatic power off
- Machine color
- Interface for danger prevention

**FANUC 31i (Standard)**
- Simultaneously controlled axes: 4 axes
- Spindle override 50-150% (each 10%)
- Cutting feed override 0-200% (each 10%)
- Rapid traverse override 1, 2, 4, 5, 15, 25, 50, 100%
- Rapid traverse bell-shaped acceleration / deceleration
- Inch / metric conversion
- Position switch
- Manual handle feed 1 unit
- Helical Interpolation
- Thread cutting, synchronous cutting
- Al contour control
- Workpiece coordinate system
- Addition of workpiece coordinate system: 48 sets (Opt. 300 sets)
- Custom macro
- Tool offset memory C
- Canned cycle for drilling
- Automatic corner override
- Rigid tap
- Tool life management function
- Tool offset: 200 pcs for 60ATC, 400 pcs for 120ATC
- Tool radius / Tool nose radius compensation
- Stored pitch error compensation
- Parts program storage: 512KB
- Number of registrable programs expansion 1: Max. 1,000 programs
- Background editing
- Run hour and parts count display

**FANUC 31i (Option)**
- Stored stroke check 2
- Manual handle interruption
- Single direction positioning
- Cylindrical interpolation
- F1-digit feed
- Addition of optional block skip
- Polar coordinate command
- Optional chamfering / corner R
- Programmable mirror image
- Scaling
- Coordinate system rotation
- Playback function
- Multi-language display: (Chinese / French / German / Italian / Korean / Spanish)

Specifications and accessories are subject to change without notice.
KIWA Japan Quality and Reliability

**KIWA Japan** is an established, high quality machine tool builder, in business since 1869.

Using only the best materials and components, applied with intelligent design, KIWA craftsmen consistently produce world-class machine tools at the level of quality you’ve come to expect from Japan.

Features like the overbuilt meehanite casting and roller guide ways, rigid box-type wall structures and posit-lock pallet clamping, all ensure accurate, repeatable machining, shift after shift in demanding production environments.

**KIWA Japan. Quality and reliability you can trust, to move your business forward.**
KIWA machines are exclusively imported and backed throughout North America by Method’s industry-leading application expertise, service and support. Wherever you are, there is a Methods near you.

Arizona
615 West 24th Street
Tempe, AZ 85282
602-437-2220

California
6200 Artesia Blvd.
Buena Park, CA 90620
714-521-2507

Colorado
14998 W. 6th Avenue
Golden, CO 80401
303-216-1300

Illinois
2400 Vantage Drive
Elgin, IL 60124
847-783-6800

Massachusetts
65 Union Avenue
Sudbury, MA 01776
978-443-5388

Michigan
50531 Varsity Court
Wixom, MI 48393
248-624-8601

North Carolina
13607 South Point Blvd.
Charlotte, NC 28273
704-587-0507

Methods Distributors
Contact Methods for a dealer/distributor near you.

Ask for a KIWA Demo today!
1-877-668-4262 (1-877-MMT-4CNC) ➤ www.methodsmachine.com