Kira Heavy Duty Vertical Traveling Column Machines

30 TAPER MODELS
- KM1, KM1P, KM1X,
- KM2, KM2P, KM2X,
Small foot print All 30 taper models available with 40 taper option

40 TAPER MODELS
- KM3, KM3P, KM3X,
- KM4, KM4TT, KM4X,
- KM5, KM5TT, KM5X,
- KM6, KM6TT, KM6TTX,
- KM7, KM7TT, KM7TTX,
- KM8, KM8TT, KM8TTX.
All 40 taper models available with 50 taper option
Kira Heavy Duty KM1 & KM2

- Spindle RPM: 15,000rpm (Optional 40 taper with 10,000rpm)
- Spindle Power: 20HP (Optional 40 taper 24HP)

<table>
<thead>
<tr>
<th>KM1</th>
<th>KM2</th>
</tr>
</thead>
<tbody>
<tr>
<td>X axis Travel: 520mm</td>
<td>700mm</td>
</tr>
<tr>
<td>Y axis Travel: 420mm</td>
<td>500mm</td>
</tr>
<tr>
<td>Z Axis Travel: 480mm</td>
<td>480mm</td>
</tr>
<tr>
<td>Weight: 5,000kg</td>
<td>6,000kg</td>
</tr>
<tr>
<td>Table size: 600x420mm</td>
<td>850x560mm</td>
</tr>
<tr>
<td>Table load: 1,000kg</td>
<td>1,000kg</td>
</tr>
</tbody>
</table>

- Control: Fanuc 0i-MD (Option Heidenhain 530i)
- Preparation Coolant Through The Spindle
- Chip Conveyer
Kira Heavy Duty KM1 & KM2 Machines

<table>
<thead>
<tr>
<th></th>
<th>KM1</th>
<th>KM2</th>
</tr>
</thead>
<tbody>
<tr>
<td>X axis</td>
<td>520mm</td>
<td>700mm</td>
</tr>
<tr>
<td>Y axis</td>
<td>420mm</td>
<td>500mm</td>
</tr>
<tr>
<td>Z axis</td>
<td>480mm</td>
<td>480mm</td>
</tr>
<tr>
<td>Rapid</td>
<td>2,362inc</td>
<td>2,362inc</td>
</tr>
<tr>
<td>Working table</td>
<td>600x420mm</td>
<td>850x500</td>
</tr>
</tbody>
</table>

- Control: Fanuc 0i-MD
- Tool Capacity: 20 Tool Magazine
- Spindle: ISO 30 or BT 30, 20HP
- T to T: 0.9 sec
- C to C: 2.3 sec.
- Optional 40 Taper, with 16 Tools
- Coolant Tank
- Chip Conveyor

15,000rpm, Fixed Table
Available 40 TAPER, 10,000rpm, 24HP
Spindle RPM: 15,000rpm (Optional 40 taper with 10,000rpm)
Spindle Power: 20HP (Optional 40 taper 24HP)
Pallet Change Time: 3.4sec
Control: Fanuc 0i-MD
Preparation Coolant Through The Spindle
Chip Conveyer

KM1 KM2
X axis: 520mm 700mm
Y Axis: 420mm 500mm
Z axis: 480mm 480mm
Table load: 250kg 350kg
Table size: 650x430mm 750x500mm

Kira Heavy Duty KM1P & KM2P
Pallet changer Machine with Hirth Coupling
Kira Heavy Duty KM1 Machine

30 TAPER MODELS

15,000rpm, Fixed Table
Available 40 TAPER, 10,000rpm, 24HP
Kira Heavy Duty KM2 Machine

30 TAPER MODELS

15,000rpm, Larger Fixed Table
Available 40 TAPER, 10,000rpm, 24HP
**Common Standard Features**

- Spindles: 40 taper
- Speed: 12,000RPM & 47 H.P.
- Tool Capacity: Isolated 30 Tool Magazine, Random access design.
- Available: 50 Taper Spindle Option at 52 KW, 70 H.P. 20 Tools
- Control: Fanuc 31i MD.
- Spindle chiller
- Table type: Fixed Table and a Traveling Column Design.
- Rapid traverse: X, Y, & Z 2,362 IPM.
- Z axis: Counter Balance
- X, Y, and Z axis: Roller packs
- Y axis: Ram design for Minimal Mass Movement
- Coolant Tank
- Chip Conveyor
Kira Heavy Duty KM3, KM4, KM5, KM6, KM7 and KM8

<table>
<thead>
<tr>
<th>X axis</th>
<th>Y Axis</th>
<th>Z axis</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM3</td>
<td>1,000mm</td>
<td>600mm 640mm</td>
</tr>
<tr>
<td>KM4</td>
<td>1,650mm</td>
<td>600mm 640mm</td>
</tr>
<tr>
<td>KM5</td>
<td>2,200mm</td>
<td>600mm 640mm</td>
</tr>
<tr>
<td>KM6</td>
<td>3,000mm</td>
<td>800mm 800mm</td>
</tr>
<tr>
<td>KM7</td>
<td>4,500mm</td>
<td>800mm 800mm</td>
</tr>
<tr>
<td>KM8</td>
<td>6,000mm</td>
<td>800mm 800mm</td>
</tr>
</tbody>
</table>

- Standard
- Spindle Preparation for High Pressure Coolant
- Travelling column
- All axes use Roller packs for Rigidity
- Fixed Table
- Z Axis Ram less mass movement for accuracy.
- Counter balance on Z axis
- Fanuc 31i Control
- Air blow on Spindle Taper

KM3 Shown
The KM3P has two pallets, with a Hydraulic Support Mechanism under the Work Zone Pallet to permit heavy loads.

- Table Load: 880 lbs per pallet
- Working area: X 850mm x Y600mm per Pallet
- Pallet Change time: 5.1 second with a Hirth coupling for Highly accurate Registry
- Center Through Pallet for Hydraulics and Pneumatics

Standard (KM3 Thru KM8)

- Spindle: 12,000RPM Option (18,000 & 24,000 RPM)
- Spindle Cooler
- Standard heat exchanger in the Electrical Cabinet
- Z axis counter balance
Kira Heavy Duty KM3P Pallet Changer

- Tool Capacity: 30 Tool Magazine
- Chip to Chip: 3.6 Seconds
- The Isolated Front Loading Area,
- Parts can be Loaded On One Pallet While the Other Pallet’s Parts are Machined.
- Each Pallet can also be Programmed to Process Different Parts or the Pallets can be used for A & B Loads.
- Spindle Cooler

- Tool Magazine Installed to the Base of the Machine Preventing Column Sag and Extra Weight on the Traveling Column.

40 TAPER MODELS

12,000rpm, Pallet changer
Available 50 TAPER, 10,000rpm, 70HP
Kira Heavy Duty KM3P Pallet Changer

Table Clamped

Table in Rotation

Hydraulic pallet support for heavy parts

Hirth style gear for accurate Registry

40 TAPER MODELS

12,000rpm, Pallet changer
Available 50 TAPER, 12000rpm, 70HP
Kira Heavy Duty KM3P Pallet Changer

- Shown is the Pallet Outside the work zone
- Shown two Pallets with Fixtures for Different Parts
- A View of the Hydraulic Pallet Support

40 TAPER MODELS
12,000rpm, Pallet changer
Available 50 TAPER, 10000rpm, 70HP
The KM3X Five Axes Machine is Designed as a Rigid Module with an Integrated Trunnion Style Rotary for 4<sup>th</sup> & 5<sup>th</sup> Axes Capability

- Table size: 500mm in Diameter
- Working Surface Area: 560mm Max. Part Dia.
- Maximum Table Load: 1,100lbs
- Tool #: Standard 30 Tool Magazine,
- Spindle: 40 Taper 12,000RPM, 47HP
- Z Axis Counter Balance,
- Spindle Cooler,
- X axis Ball Screw Compensation,
- Centralized Lube System,
- Fanuc 31i MD Control with 4 Axes Contouring 5<sup>th</sup> axis Positioning. 4+1
- Optional Heidenhain 530i Control for Full 5 Axes Contouring.
Kira Heavy Duty KM4

The Basic KM4 line of Machines have Fixed Table Designs.

- X Axis Stroke : 1,650mm
- Working area : 1,800 x 600mm
- Table Load : 8,800 lbs.

- Tool capacity : 30 Tool Magazine
- Chip To Chip : 3.6 seconds
- Spindle : 40 Taper
- Speed : 12,000 RPM, 47 H.P.
- Prepped for Coolant Thru,
- Air Blow in the Spindle Taper
- Spindle Cooler
- 640mm Z axis has a Counter Balance.
- Central Lube System.
- Guides : Roller Pack Designs
Kira Heavy Duty KM4 Dual Zone

- The Dual Zone Permits the use of two work Zones.
- One Used for Machining while the other Zone is Loaded and Unloaded.
- Each Zone is Programmable so That Different Parts can be Processed or Zones Used for A & B Loads.
- Requires an Optional Second 30 Tool Magazine so Each Zone is Separated to Prevent Column access to the Zone that is in the Load and Unload Mode.
Kira Heavy Duty Enhanced KM4X 5 Axes Machine

- Y and Z axis: Expanded 800mm
- Z Axis: Twin Ball Screws counter balanced.
- Table size: 800mm with 8 T Slots. Parts up to 1,000mm in Diameter Can Be Processed
- Control: The Fanuc Control has 4\textsuperscript{th} Axis Contouring, and 5\textsuperscript{th} Axis Positioning.
- Full Contouring: Optional Heidenhain 530i Control.
- Tool Capacity: 30 Tool 40 Taper Magazine
- Prepped for Coolant Through Spindle
- Spindle Cooler.
- Chip Conveyor
- Coolant Tank
- Table Weight: 850kgs.(1,870lbs.)
Kira Heavy Duty KM5

The KM5 is a Fixed Table Traveling Column Machine.

- X Axis: 2,200mm
- Y Axis: 600mm
- Z Axis: 640mm counter balance
- Working area: 2,400mm x 600mm
- Table Weight: 11,000lbs.
- Control: Fanuc 31i MD.
- Tool capacity: 30 Tool Magazine

- Spindle: 40 Taper
- Speed: 12,000RPM with 47 H.P.
- X Axis Linear Motor,
- Spindle Cooler,
- Prepared Coolant thru Spindle
- Tank, Chip Conveyor, and Auger
- Heat Exchanger in the Power Panel

KM5 Table & Chip Auger
Kira Heavy Duty KM5 & KM5 Dual Zone

- Working area: 2,400mm Long
- X Axis Stroke: 2,200mm Scaled Linear Motor Driven.
- Tool Capacity: 30 Tool Magazines
- Zones are larger (800mm) than KM4 Dual Zone (600mm)
- Table Weight: 6,000kgs.
Kira Heavy Duty KM6 Through KM8

12,000rpm, 47HP Shown with Two Tool Changers

- KM6: 3,000mm X axis, 800mm Y axis, 800mm Z axis, Scaled Linear Motors on the X Axis
- KM7: 4,500mm X axis, 800mm Y axis, 800mm Z axis, Scaled Linear Motors on the X Axis
- KM8: 6,000mm X axis, 800mm Y axis, 800mm Z axis, Scaled Linear Motors on the X Axis
- Fanuc 31i-MD Control, Fixed Table for Ease of Multiple Axes Integration or Dual Zone
- Coolant Tank & Chip Conveyor Included Prepped for Coolant Through Spindle

Z Axis Counter Balanced

KM6 Dual Zone Shown

50 taper option & 70 H.P.
Kira Heavy Duty KM4TT Through KM8TT

15,000rpm, 47HP with Tilting head

X axis     Y Axis     Z axis

- **KM4TT**  1,650mm  600mm  640mm  X Axis is Ball Screw Driven with Thermal Compensation.
- **KM5TT**  2,200mm  600mm  640mm  Scaled Linear Motors on the X Axis
- **KM6TT**  3,000mm  800mm  800mm  Scaled Linear Motors on the X Axis
- **KM7TT**  4,500mm  800mm  800mm  Scaled Linear Motors on the X Axis
- **KM8TT**  6,000mm  800mm  800mm  Scaled Linear Motors on the X Axis

+/- 120 Degree Tilt

KM6 Shown

Not available 50 taper option
Kira Heavy Duty KM6TTX Through KM8TTX

All specification are same as TT (Tilting Head) series. 5th axis rotating table 600mm diameter built into the table Twin Z axis ball screws counter balance on Z axis.
Spindle Cutting KM3 to KM8

- **Milling**: 1000 cm³/min
  Max milling removal on C45 Steel (0.52mm • 5 inserts)

- **Drilling**: 50mm
  Max Drilling Capacity on C45 Steel

- **Tapping**: M36
  Max tapping capacity on C45 Steel

Heavy Duty Traveling Column
40 TAPER MODELS

X Axis Scaled Linear Motor Drive KM5 Through KM8
40 TAPER MODELS

Five Axis Heavy Cutting of Inconel
Thank You

All right reserved, Copyright ©KIRA AMERICA
Kira America Corporation