MYCENTER® XV SERIES

VERTICAL MACHINING CENTERS

KITAMURA®
Machining Challenges-Simplified®

KITAMURA®
Machining Challenges-Simplified®

MYCENTER® XV Series VERTICAL Machining Centers

Meet the Ultra-Compact Mycenter®-XV Series VMCs, your smart solution for precision machining

High Precision

Positioning Accuracy ±0.002mm ±-0.000079")/Full Stroke

Repeatability ±0.001mm (±0.000039")

Rigid Meehanite Cast C-Frame Construction

Standard Intelligent Advanced Control System (Automatic Thermal Displacement)

Ultra-High Speed, High Precision SSS (Super Smooth Surface) Control

High Speed - High Torque

Powerful 31kw (41HP) 15,000min^{-1}, Dual Contact Spindle

High Torque: 141 N•m (104 ft-lb)

High-Speed Tapping: 6,000min^{-1}

Rapid Feedrate: 52m/min (2,047ipm) (X & Y), 48m/min (1,890ipm) (Z)

Pre-Plumbed for Coolant Thru the Spindle

Superior Chip Removal System

2 Chip Augers on Either Side of the Bed Casting

5 Coolant Nozzles and 1 Air Blow Nozzle at Spindle

Standard Base Wash Coolant

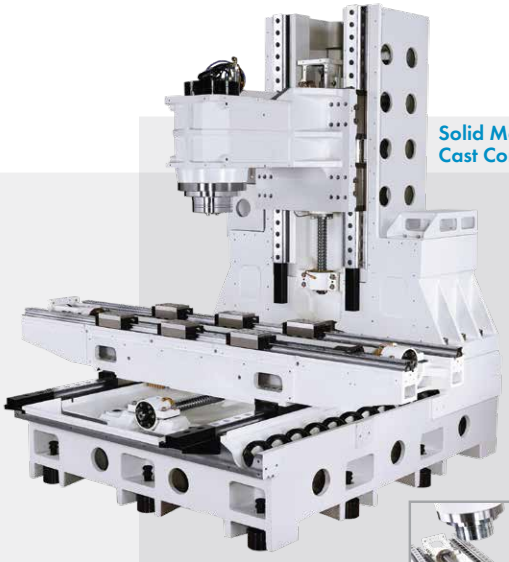
Dual Position Scraper Type Chip Conveyor Standard

X & Y Axes are Fully Covered for Smooth Chip Flow

Highly Rigid Construction

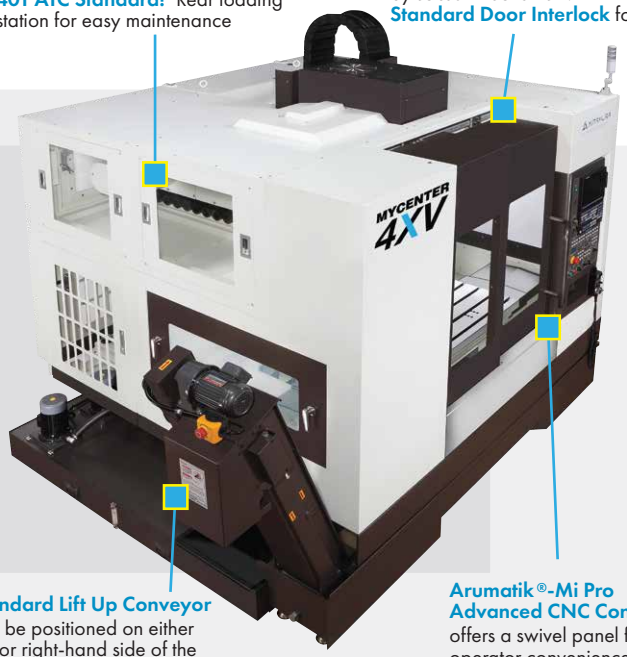
Superior Structural Design Where Innovation Meets Durability

Kitamura's Mycenter®-XV Series VMCs are engineered with precision, delivering unmatched quality, strength, and durability that stand the test of time. Built from the ground up with solid Meehanite cast construction, robust materials, and cutting-edge design, they ensure exceptional rigidity and accuracy in every operation even under the most demanding cutting conditions. Designed for versatility, they seamlessly adapt to a wide range of industries and applications providing the performance and reliability you need to be nimble and drive success.



Solid Meehanite Cast Construction

3-Block, Double Roller LM Guide System
Ultra-super-high rigidity.
Long term smooth motion operation.



40T ATC Standard! Rear loading station for easy maintenance

Synchronized two piece door actuated by scissor mechanism.
Standard Door Interlock for safety

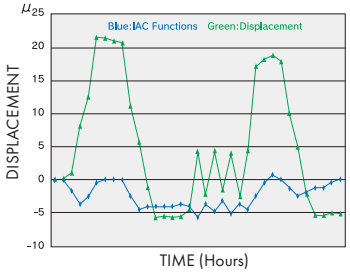
Standard Lift Up Conveyor
can be positioned on either left or right-hand side of the machine*

Arumatik®-Mi Pro Advanced CNC Controller
offers a swivel panel for operator convenience

**Left, Right switchability not available on 2XV Sparkchanger*

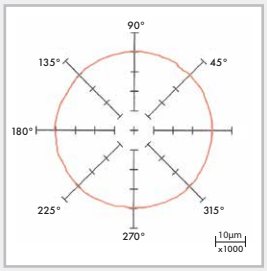
"Excellence in every dimension" - Superior Accuracy

Intelligent Advance Control (IAC) Thermal Displacement System



Our standard high efficiency **Intelligent Advanced Control System (IAC)** consists of 8 strategically located sensors and machine efficiency monitors that work to keep component growth due to machining heat build-up to less than ±5 microns (±0.0002").

Contouring Accuracy (roundness) 1.73μm (0.000068") Actual Data



Workpiece:	AL
Spindle Speed:	15,000min^{-1}
Feedrate:	500 mm/min (19.7ipm)
Diameter:	Ø50mm (Ø1.97")

NOTE: The data above is an example - these results may not be obtained due to variations in material specifications, environmental conditions during measurement, workpiece set-up, cutting conditions and other factors.

Accuracy: ±0.002mm (±0.000079")/Full Stroke, Repeatability: ±0.001mm (±0.000039")

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MYCENTER® XV Series VERTICAL Machining Centers

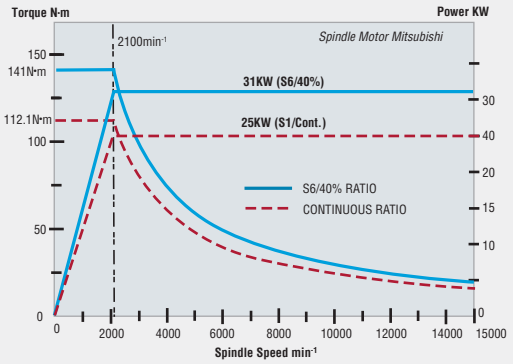
Robust, High-Performance Spindle

Power, Speed and Precision

Mycenter XV Series VMCs are equipped with powerhouse spindles that deliver exceptional performance across a wide range of demanding applications. Boasting high torque for cutting the toughest materials and super-efficient rigid tapping, these spindles ensure precision and power. High-speed capabilities provide a flawless fine finish while the super-rigid dual contact design enhances stability allowing for faster feed rates and reduced cycle times. Additionally, the spindle's thermally stable construction delivers consistent performance making it an ideal choice for manufacturers seeking to push the boundaries of productivity and quality.

15,000min^{-1} Spindle Benefits:

- Faster feedrates reduce cycle time
- Higher torque output
  141 N•m (104 ft-lbs) / Cont.
- More Power
  31kw (41HP) / 2 min.
  25kw (33HP) / Cont.
- Rigid Tapping Speed 6,000min^{-1}
- Thermally Stable Design



Main Spindle Power and Torque Diagram

Machine Type:
Mycenter-3XV, 4XV, 5XV, 2XVSP, 3XVT 15000min^{-1}

The perfect balance of power and precision . . . High torque and low rpms ensure efficient cutting of tough materials while higher speeds deliver a fine finish. This balance of torque and speed allows for faster cycle times, superior surface quality and enhanced overall productivity in your machining operations.

MILLING

Tool	Ø63mm (Ø2.5") Face Mill
Material:	S45 (1050) Steel
Cutting W x D:	50 x 6mm (1.97" x 0.24")
Feed Rate:	2,600mm/min (102.4 ipm)
Spindle Speed:	2,200min^{-1}
Material Removal:	780cc/min (50 cu in/min)
Spindle Load:	87%

DRILLING

Tool	Ø45mm (Ø1.75") Drill
Material:	S45 (1050) Steel
Cutting Depth:	35mm (1.38")
Feed Rate:	550mm/min (21.7 ipm)
Spindle Speed:	2,400min^{-1}
Material Removal:	866cc/min (53 cu in/min)

TAPPING

Tool	M33 x 3mm (1.25" x 7) Tap
Material:	S45 (1050) Steel
Cutting Depth:	35mm (1.38")
Feed Rate:	340mm/min (13.4 ipm)
Spindle Speed:	128min^{-1}
Material Removal:	866cc/min (53 cu in/min)

Better Machining by Design

Simple and Efficient Tool Management

Class Leading High Capacity 40 Tool ATC*

Large capacity and rapid 2.2 second tool change times deliver exceptional flexibility and efficiency. Expanded tool capacity minimizes interruptions and setup times, boosting productivity, especially in complex machining processes. With more tools readily available, operators can easily handle diverse and intricate projects without manual tool change downtime ultimately improving workflow and output quality. The rear-loading design also simplifies maintenance and allows for easy tool replenishment while keeping the workspace clear.

**3XV: 30 Tools*

Streamlined Part Handling and Chip Removal

Large Ergonomic Work Envelope with Smooth Chip Flow

The large ergonomic work envelope ensures easy and safe loading and unloading of parts, along with an advanced chip management system that promotes optimal cutting performance, enhanced surface finishes, and extended tool life. The machine's comprehensive chip management system effectively removes debris and prevents buildup, keeping the workspace clean and efficient.

Key Features:

- **Wash Coolant:** Effectively rinses chips away from critical areas, improving visibility and cleanliness.
- **Covered X and Z Axes:** Protects key components from chip contamination, reducing maintenance and prolonging component life.
- **Coolant and Air Blow Nozzles:** Ensures chips are cleared from the cutting area, allowing for smoother cuts and improved surface finish.
- **Internal Chip Augers:** Continuously remove chips from the work area.
- **Scraper-Type Chip Conveyor:** Configurable on either side of the machine.

This integrated chip management system allows operators to focus on production without interruptions, supporting a safer and more productive machining experience.

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MYCENTER® XV Series VERTICAL Machining Centers

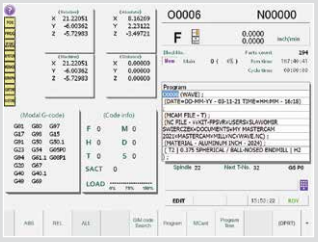
Arumatik®-Mi Pro

Uniquely Intuitive, User Focused CNC Technology

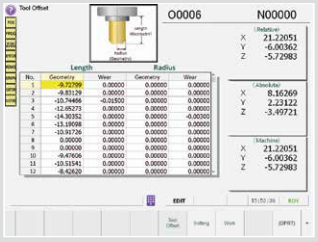
The Future of Machining Control

Elevate your machining capabilities with the Arumatik®-Mi Pro CNC Control - a groundbreaking fusion of cutting-edge touch screen technology and traditional control methods. Designed for today's demanding manufacturing environments, the Arumatik®-Mi Pro is feature packed and offers full customization to simplify CNC operation.

Harness the power of ultra high-speed processing (16 times faster than today's conventional controls), designed to enhance high-speed cutting operations and optimize acceleration and deceleration times. The result is smoother, faster machining with unparalleled accuracy. Experience the perfect blend of innovation and reliability with the Arumatik®-Mi Pro Control, where advanced technology meets user-friendly functionality.

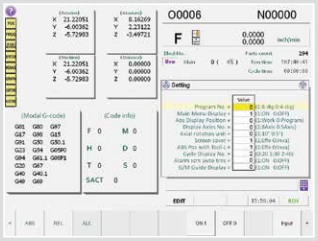


PROGRAM REVIEW Review entire program, speeds/feeds, cycle time & active tools

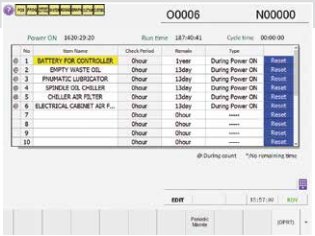


TOOL OFFSET Simply select the tool offset, input its value and run your part

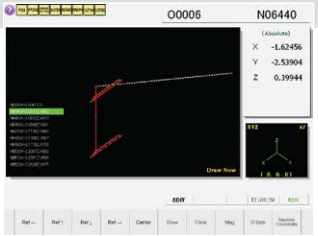
TOOL LIFE DATA Easy monitoring of tool life and redundant tools



MACHINE CUSTOM SETTINGS
Customize system settings to individual preferences



PERIODIC MAINTENANCE
Pre-set regular maintenance reminders keep your machine up and running. Customized alerts can be created to operator preferences



PATH GRAPHIC Display a representation of your tool paths to assure error free machining

A variety of familiar programming functions are easy to find and learn so that any operator can quickly master the potential of the control

Exclusive Control Features

Standard Control Features

- Large 15" Touch Screen Color LCD
- 8,190 Block Look-Ahead
- 4,500 Block Per Second Processing Speed
- High-Speed, High-Accuracy Control III
- Super Smooth Surface (SSS) Control
- Work Coordinate Offsets - 54 Sets
- 5,120 Meters Memory (2MB)
- USB Memory Interface and Ethernet I/F for Faster and Smoother Program Transfer
- Macro Variable, 8,000 Sets
- Tool Offset, 999 Pcs, 6 Digits
- 3-Dimensional Tool Radius Compensation
- Helical Interpolation
- Circular Interpolation
- Optional Block Skip
- Inverse Time Feed
- Alarm Guidance
- Rigid Tap (Synchronous Feed Tapping)
- High Accuracy Spline Interpolation II
- Program Restart
- Additional Optional Block Skip
- Tool Monitoring/Adaptive Control
- G/M Code Assistance
- Maintenance Support Function
- Tool Management

Transform your operations with the **Arumatik-Mi Pro** - your ultimate partner in innovation. It's loaded with advanced features that are designed to simplify and streamline operations, ensuring you achieve precision and efficiency at every turn.

Advanced Features: Packed with cutting-edge functionalities for modern metalworking

Seamless Operations: Intuitive control for effortless workflows

Peace of Mind: Free control software updates for life keep you current and competitive

Kitamura's Exclusive Anywhere-RemOte®

Mobile Notification and Monitoring Suite

Real Time Data and Analytics, Remote Operation Functionality and Production Flexibility built in to every Machine

How can Anywhere Remote help your business?

- ✔ Realize Maximum Efficiencies
- ✔ Spot Trends as They Happen
- ✔ Engage Employees
- ✔ Improve Response Time

Anywhere Remote TV

- Display process information
- Connect directly to PC or TV
- Monitor machine status in real time
- Quickly react to changes/issues
- Monitor daily production
- Up to 10 Arumatik®-Mi Pro machines can be connected

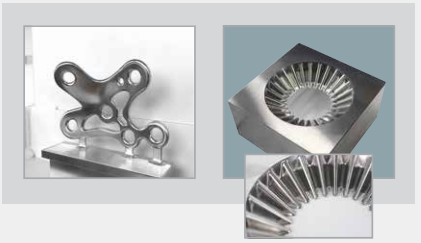
Anywhere Remote Email Status Updates

- Cycle time complete
- Part count update
- Periodic status update
- Status change update
- Variable change notification
- Alarm notification

Kitamura/Renishaw Set & Inspect

Set and Inspect on-machine probing app makes probing easy and is standard on the Arumatik®-Mi Pro CNC. An intuitive interface guides you through the process of creating a probe cycle and automatically generates the required machine code, loading it to the Arumatik®-Mi Pro. No probing experience or machine code knowledge required!

Ultra High-Speed, High-Precision Super Smooth Surface (SSS) Control



- Up to 8,192 block look ahead
- Up to 270m/min feed with 1mm/block, 4,500 blocks/sec
- Exceptional surface finish capabilities
- Ideal for die-mold/3D applications
- Smoother and faster machining

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MYCENTER® XV Series VERTICAL Machining Centers

	MYCENTER 3XV	MYCENTER 4XV	MYCENTER 5XV
Table			
Table	500 x 860mm (19.7" x 33.9")	500 x 1,120mm (19.7" x 44.1")	700 x 1,420mm (27.6" x 55.9")
Maximum Work Size (Dia. x H)	NA	NA	NA
T-Slot (Width x Qty.)	18mm (0.71") x 5	18mm (0.71") x 5	18mm (0.71") x 7
Max. Table Load	800kg (1,760 lbs.)	1,000kg (2,200 lbs.)	1,500kg (3,300 lbs.)
Travels			
X-Axis Travel	760mm (29.9")	1,020mm (40.2")	1,270mm (50.0")
Y-Axis Travel	510mm (20.0")	510mm (20.1")	710mm (28.0")
Z-Axis Travel	510mm (20.0")	510mm (20.1")	635mm (25.0")
A-Axis Travel	NA	NA	NA
C-Axis Travel	NA	NA	NA
Distance from Table Top	100 to 610mm (4.0" to 24.0")	100 to 610mm (4.0" to 24.0")	100 to 735mm (4.0" to 28.9")
Spindle			
Spindle Taper	#40 NST	#40 NST	#40 NST
Spindle Speed	50 ~ 15,000min^{-1} Built-in	50 ~ 15,000min^{-1} Built-In	50 ~ 15,000min^{-1} Built-In
Spindle Motor	31kW (41HP) AC/2 min 25kW (33HP) AC/Cont.	31kW (41HP) AC/2 min 25kW (33HP) AC/Cont.	31kW (41HP) AC/2 min 25kW (33HP) AC/Cont.
Feed			
Rapid Feed X, Y	52m/min (2,047ipm)	52m/min (2,047ipm)	52m/min (2,047ipm)
Rapid Feed Z	48m/min (1,890ipm)	48m/min (1,890ipm)	48m/min (1,890ipm)
Cutting Feed Rate X,Y, Z	20m/min (787ipm)	20m/min (787ipm)	20m/min (787ipm)
Rapid Feed (A, C-Axes)	NA	NA	NA
ATC			
Tool Storage Capacity	30 Tools - BT/CT 40	40 Tools - BT/CT 40	40 Tools - BT/CT 40
Tool Selection Method	Memory Random	Memory Random	Memory Random
Max. Tool Size (Dia. x L) With Adjacent Pots Empty	Ø75mm x 240mm (Ø3.0" x 9.4") Ø150mm x 240mm (Ø5.9" x 9.4")	Ø75mm x 300mm (Ø3.0" x 11.8") Ø150mm x 300mm (Ø5.9" x 11.8")	Ø75mm x 300mm (Ø3.0" x 11.8") Ø150mm x 300mm (Ø5.9" x 11.8")
Max. Tool Weight	7kg (15.4 lbs.)	7kg (15.4 lbs.)	7kg (15.4 lbs.)
Tool Change Time (T-T/C-C)	2.2 sec / 4.2 sec minimum	2.2 seconds / 4.2 sec minimum	2.2 sec / 4.2 sec minimum
APC			
Number of Pallets	NA	NA	NA
Pallet Change Time	NA	NA	NA
Machine Dimensions			
Required Space (W x D) Machine Height	2,415 x 2,245mm (95.1" x 88.4") 2,823mm (111.1")	3,096 x 2,295mm (121.9" x 90.1") 2,823mm (111.1")	3,605 x 2,476mm (141.5" x 97.5") 2,947.7mm (116.1")
Machine Net Weight			
	4,900kg (10,780 lbs.)	5,700kg (12,540 lb.)	8,590kg (18,898 lbs.)

Specifications subject to change without notice.

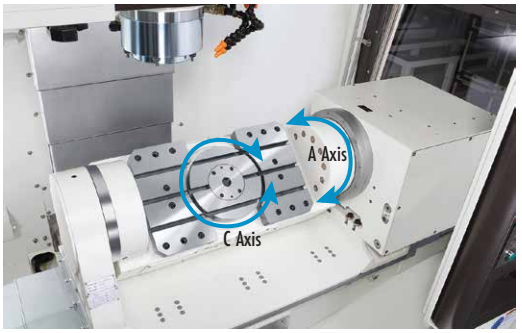
High-Performance Specifications

MYCENTER 2XV SPARK CHANGER	MYCENTER 3XVT
400 x 560mm (15.7" x 22.0")	Rotary Table Size: Ø220 (Ø8.7") w/ Full Length Table: 300 x 500mm (11.8" x 19.7")
NA	Ø500 x 255mm (Ø19.7" x 10.0")
14mm (0.55") x 3	NA
200kg (440 lbs.)	150kg / 0~45° Tilt, 85kg / 0~90° Tilt (330 lbs / 0~45° Tilt, 187 lbs / 0~90° Tilt)
600mm (23.6")	780mm (30.7")
510mm (20.1")	510mm (20.1")
510mm (20.1")	439mm (17.3")
NA	- 120 ~ +40°
NA	0 to 360°
90 to 600mm (3.5" to 23.6")	50 to 489mm (2.8" to 19.3")
#40 NST	#40NST50 ~ 50 ~
50 ~ 15,000min^{-1} Built-In	50 ~ 15,000min^{-1} Built-In
31kW (41HP) AC/2 min 25kW (33HP) AC/Cont.	31kW (41HP) AC/2 min 25kW (33HP) AC/Cont.
52m/min (2,047ipm)	48m/min (1,890ipm)
48m/min (1,890ipm)	48m/min (1,890ipm)
20m/min (787ipm)	20m/min (787ipm)
NA	9,000 deg/min (25min^{-1}), 12,000 deg/min (33.3min^{-1})
40 Tools - BT/CT 40	40 Tools - BT/CT 40
Memory Random	Memory Random)
Ø75mm x 240mm (Ø3.0" x 9.4") Ø150mm x 240mm (Ø5.9" x 9.4")	Ø75mm x 300mm (Ø3.0" x 11.8") Ø150mm x 300mm (Ø5.9" x 11.8")
7kg (15.4 lbs.)	7kg (15.4 lbs.)
2.2 sec / 4.2 sec minimum	2.2 sec / 4.2 sec minimum
2	NA
11.4 sec	NA
2,561 x 2,972mm (100.8" x 117.0") 2,921mm (115.0")	3,039 x 2,293mm (119.6" x 90.3") 2,975mm (117.1")
6,400kg (14,080 lbs.)	6,400kg (14,080 lbs.)

Boost Production with the Mycenter®-2XV Sparkchanger

Easily load and unload parts when the machine is in cycle with a high-speed, factory installed 2-station 180-degree rotating automatic pallet changer.

Mycenter®-3XVT 5-Axis Flexibility



The M-3XVT's integrated trunnion table offers the rigidity, accuracy and stability needed to productively machine complex part geometries in a single set-up.

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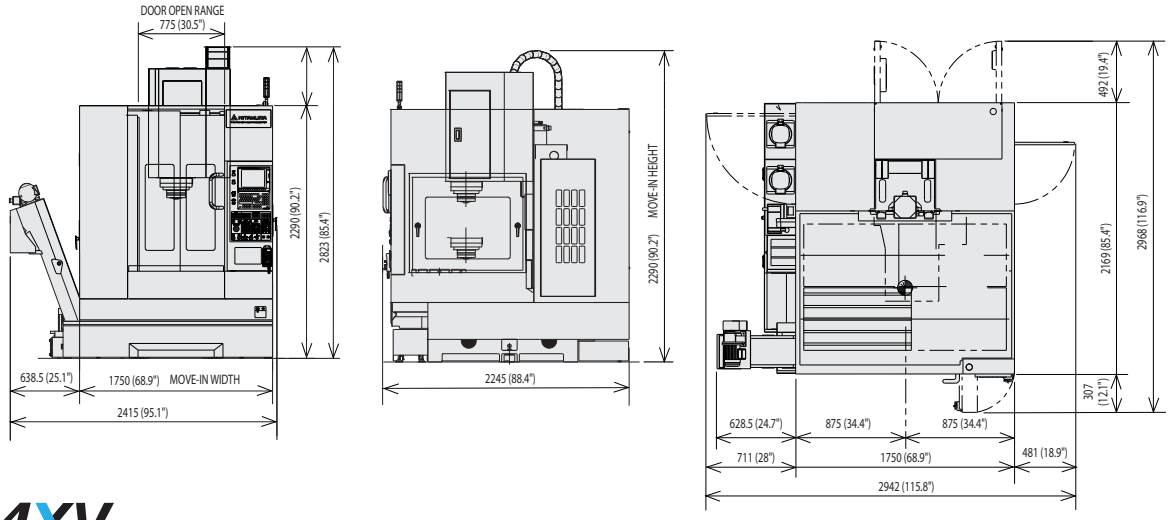
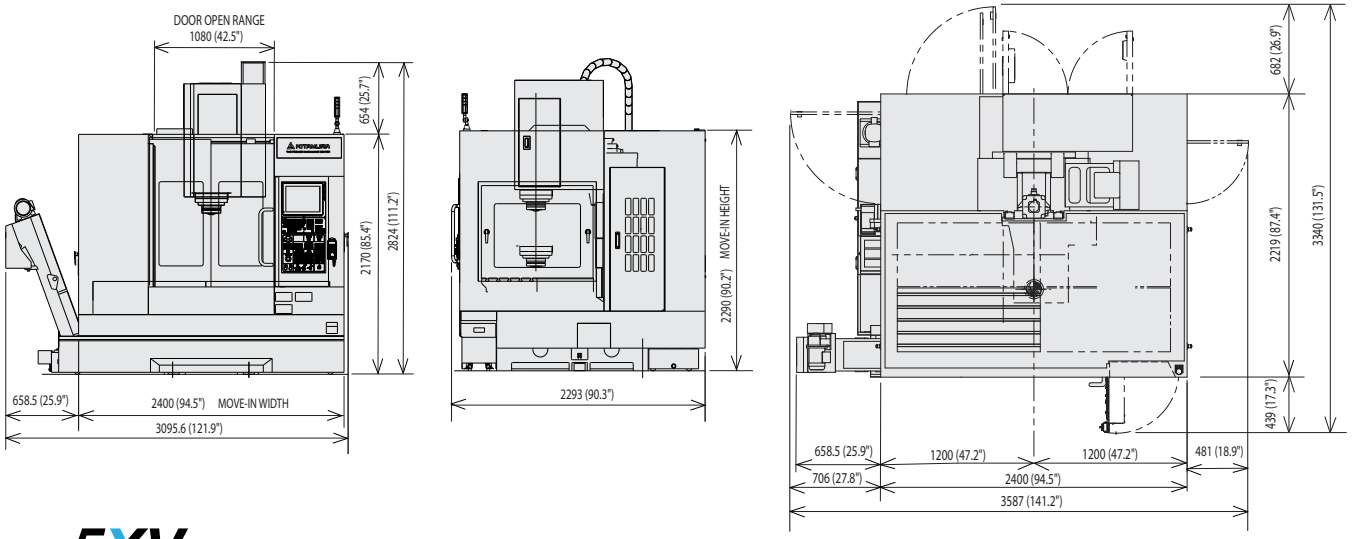
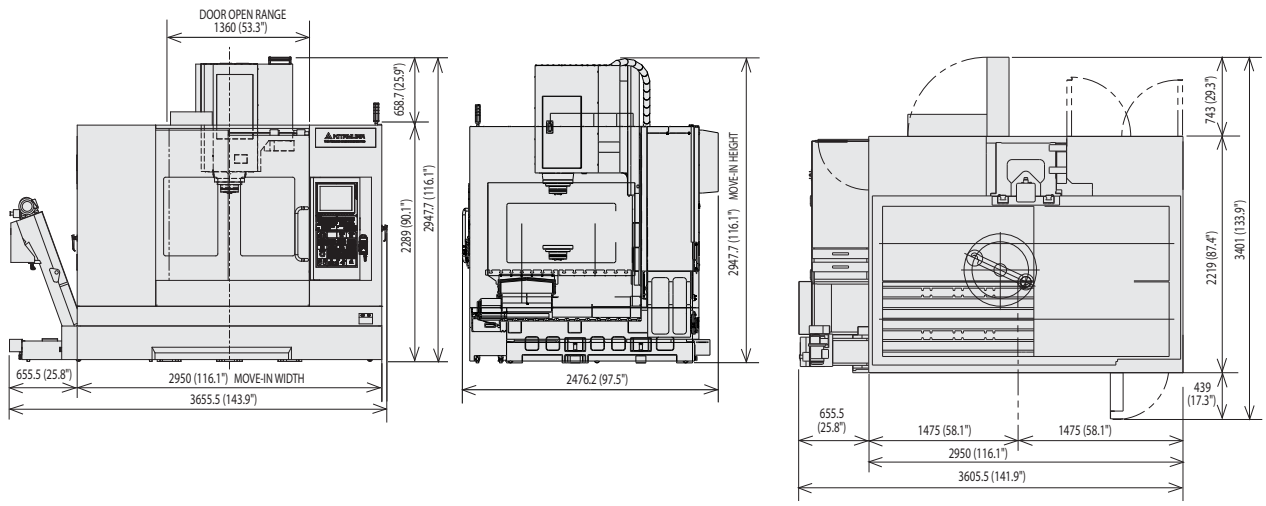
MYCENTER 3XV



MYCENTER 4XV

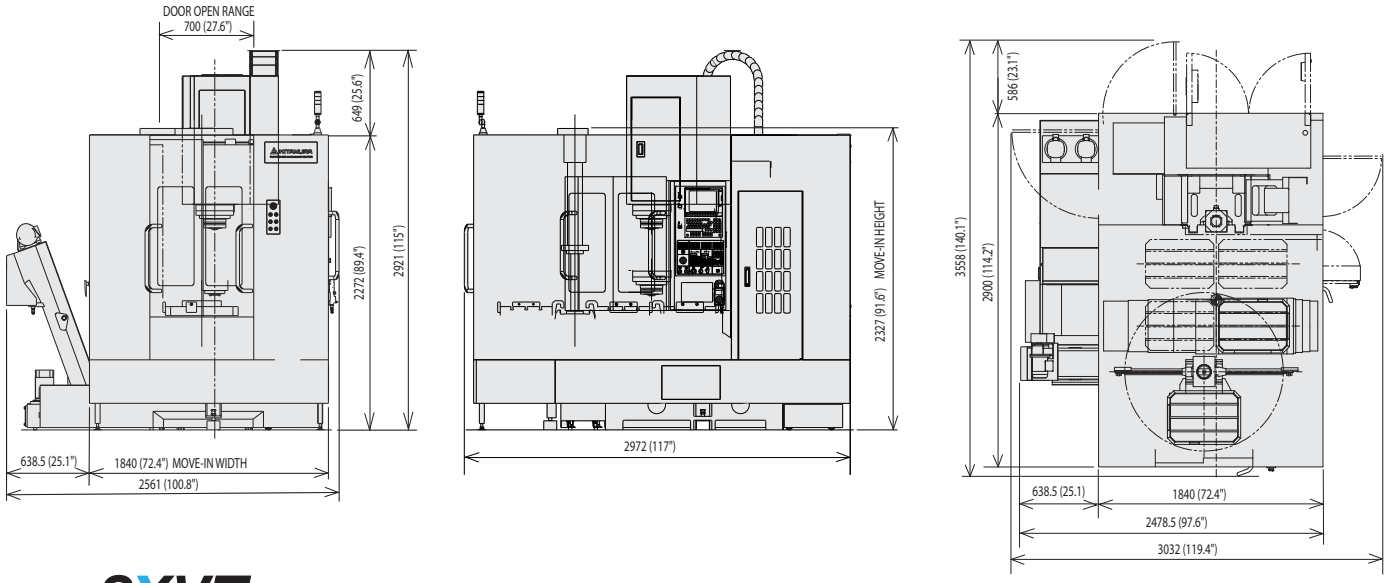


MYCENTER 5XV

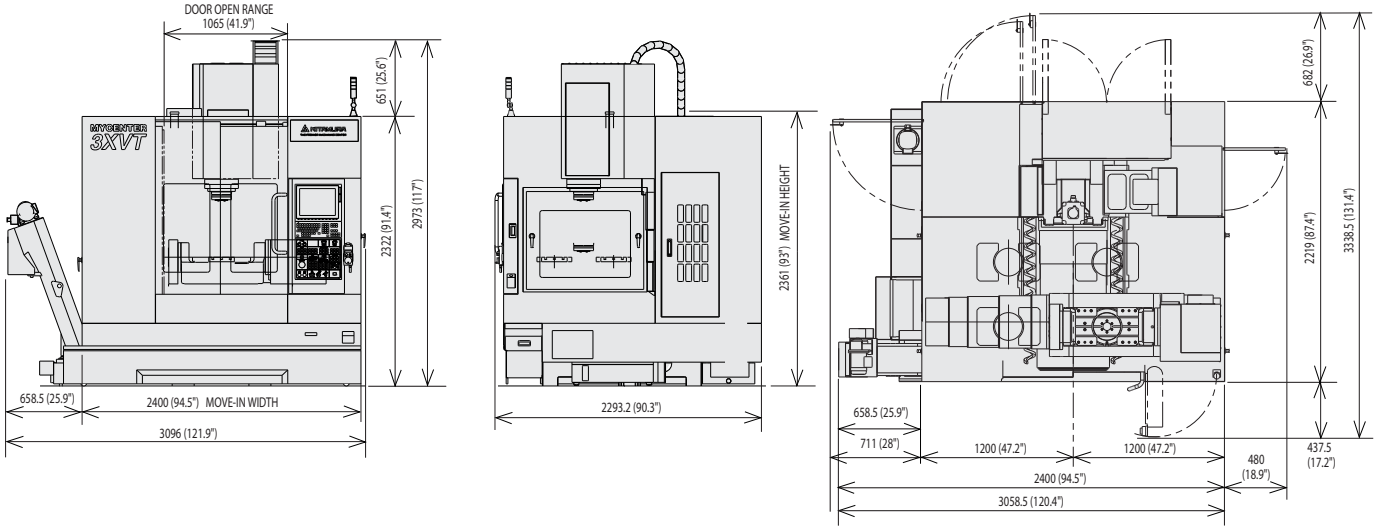


Ultra-Compact Floor Plans

MYCENTER 2XV SPARK CHANGER



MYCENTER 3XVT



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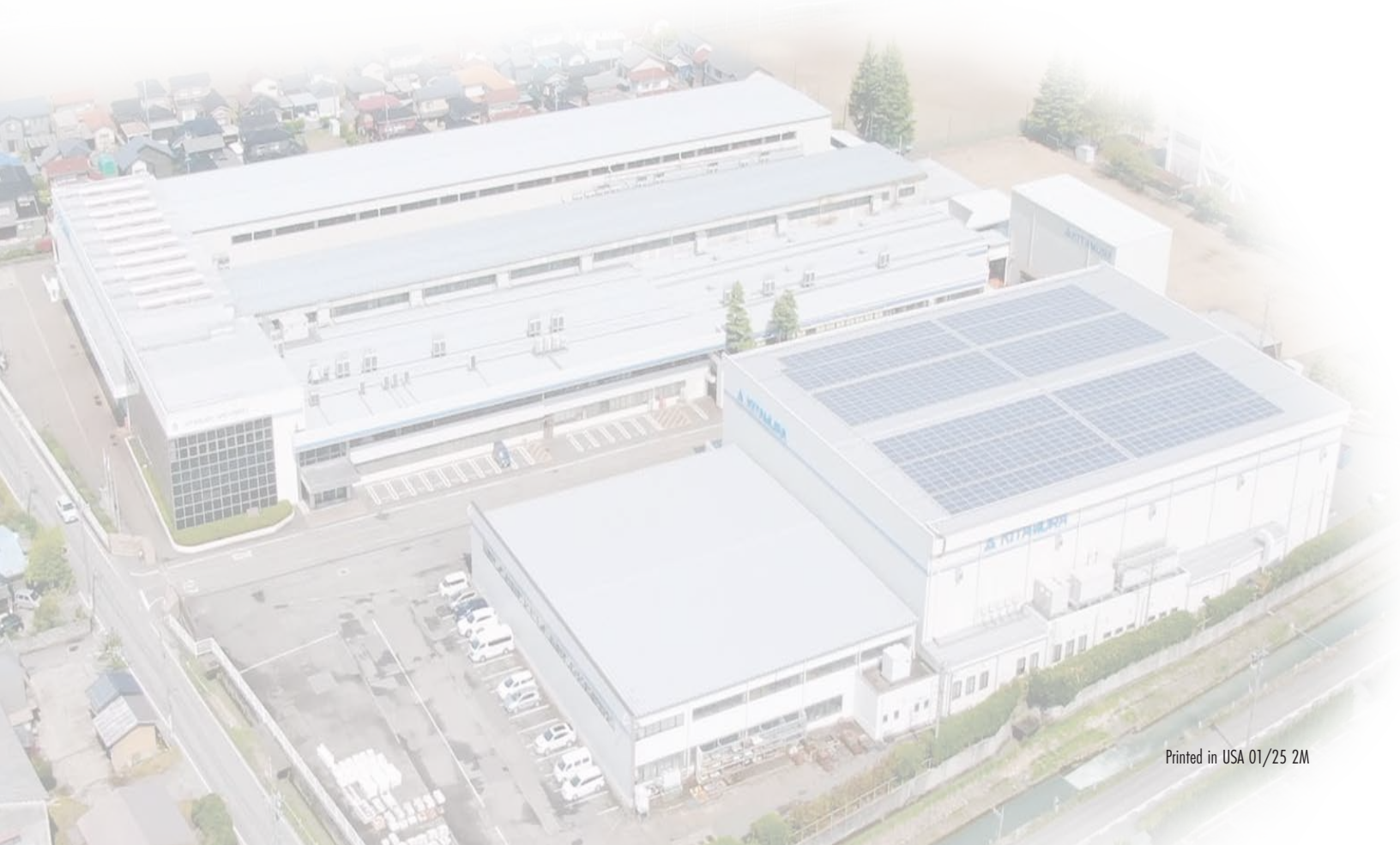

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