

Supercell SERIES



5 - AXIS HORIZONTAL
MACHINING CELLS

SIMPLIFY THE COMPLICATED

SUPERCELL

S E R I E S

SUPERCELL-300G



The solution to today's complex production demands.

Get the competitive edge. Put your machine tool investment to work day and night, manned or unmanned with Kitamura's **SUPERCELL 5-Axis Horizontal Manufacturing Cells**. These space saving production centers offer multi pallet and multi tool configurations to run several like or unique parts at a time, largely unattended for full utilization of your machine tool. Full simultaneous 5-axis capabilities allow for the machining of a part, complete, in one operation while unique floor layouts afford easily visible and easily accessible part set-up and quality control. Standard ballscrew cooling system, linear & rotary scale feedback and IAC System guarantee positioning accuracy of $\pm 0.002\text{mm}$ ($\pm 0.000079"$) / Full stroke. Repeatability: $\pm 0.001\text{mm}$ ($\pm 0.000039"$)

- The ability to run unmanned dramatically reduces set-up times
- Horizontal machine configuration for efficient chip evacuation
- Linear and rotary scale feedback on all axes
- High speed 20,000rpm dual contact spindles
- Easy accessibility to the work area and tool magazine

SC300G, SC400G

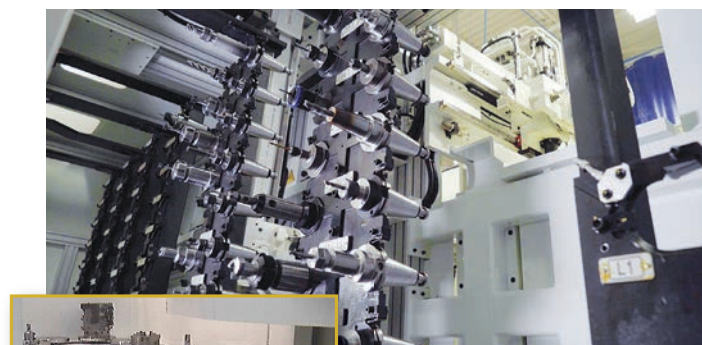
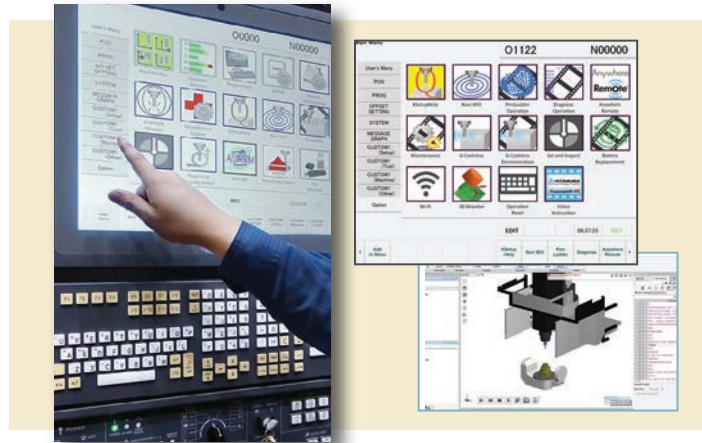
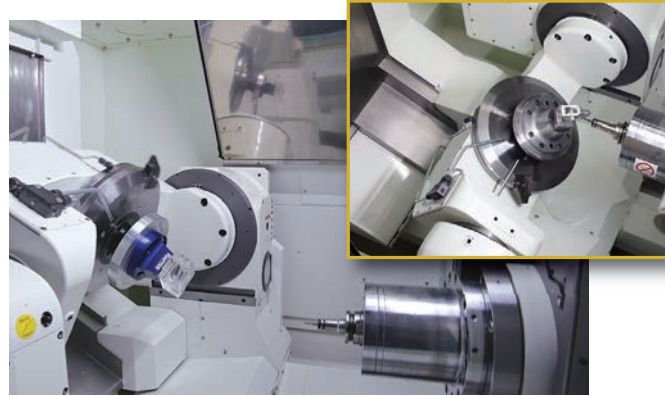
- The SUPERCELL Series is designed with a 360° rotary table combined with a highly rigid integrated trunnion table for maximum flexibility in positioning the workpiece closer to the spindle.
- The 4th and 5th axes employ ultra-high precision roller gear cam technology along with a rigid hydraulic clamping system for unmatched stability and accuracy. 4th and 5th axes rotary scales standard.

Arumatik[®]Mi Pioneering Icon CNC Operation

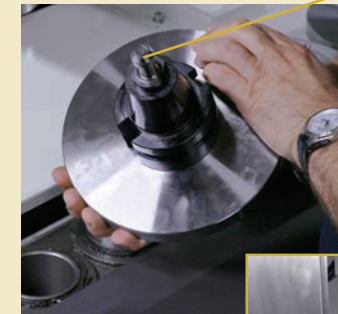
- 67 million Pulse Encoder technology with 8,192 block look ahead processing speed
- Software upgrades throughout the life of the control
- Fanuc user-friendly
- Customizable and comfortable user experience
- Video Guidance and Visual Programming screens
- Advanced 5-axis NC simulation & verification software
- Anywhere **RemOte** mobile notification and machine monitoring suite

- SUPERCELL-300G offers a standard 174-Tool matrix style, fixed pot tool changer with up to 314 tools available as an option
- SUPERCELL-400G offers a standard 140-Tool chain style, fixed pot tool changer with up to 290 tools available as an option
- Kitamura's patented high-speed, fixed pot ATC system ensures proper tool identification and offers quicker and smoother tool changes when dealing with more complicated or varied lot parts

- The space saving 20-station pallet pool allows the ability to run small to medium sized, highly complex parts completely unmanned. Run single lot parts or up to 20 unique parts
- The uniquely integrated design of the pallet pool system out front of the machine allows easy access and easy visibility of all pallets simultaneously for easier part setup while keeping a tight floor space footprint
- Both 40 and 80-station pallet pools are an available option for each model



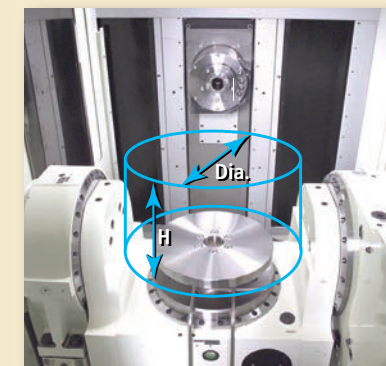
SUPERCELLS deliver these important design benefits



Kitamura's integrated work ID system employs an IC chip on the bottom of each pallet allowing for storage and communication of pallet work data quickly and accurately to the easy-to-operate pallet scheduling sub menu.



Kitamura's Automatic Work Handling Robot is exclusively designed for the SUPERCELLS, allowing for smooth and swift pallet change out, reducing pallet load and unload times for precise and safe JIT operation for highly mixed production runs.



Max. Workpiece Dia. x H

	SC300G	SC400G
Dia.:	8.3" (210mm)	15.7" (400mm)
Height:	8.7" (220mm)	11.8" (300mm)

Generous work envelope houses trunnion style table for full simultaneous 5-axis machining. SUPERCELLS can be equipped with up to 120 pallets and a 314 tool capacity as optional, depending on model.

SUPERCELLS are available in 2 sizes to meet your specific cell production requirements.



SPECIFICATIONS SUPERCELL SERIES

SUPERCELL-300G

Travel: 18.1" x 16.1" x 18.1"
(460 x 410 x 460mm)



SUPERCELL-400G

Travel: 20.1" x 20.1" x 20.1"
(510 x 510 x 510mm)



SUPERCELL-300G

SUPERCELL-400G

Table	SUPERCELL-300G	SUPERCELL-400G
Table		
Pallet Size	Ø200mm (Ø7.9")	Ø350mm (Ø13.8")
Table Indexing	0.001 Degree (4th / 5th Axes)	0.001 Degree (4th / 5th Axes)
Max. Pallet Load	20kg (44 lbs.)	80 kg (176 lbs.)
Max. Workpiece Dia. x H	Ø210 x 220mm (Ø8.3" x 8.7")	Ø400 x 300mm (Ø15.7" x 11.8")
Travels		
X-Axis Travel	460mm (18.1")	510mm (20.1")
Y-Axis Travel	410mm (16.1")	510mm (20.1")
Z- Axis Travel	460mm (18.1")	510mm (20.1")
A-Axis Travel	+30 to -120 Degrees (*with some restrictions)	0 to -100 Degrees (*with some restrictions)
B-Axis Travel	0 to 360 Degree	0 to 360 Degree
B-Axis Ctr. to Spindle Nose	60mm ~ 520mm (2.4"~20.5")	100mm ~ 610mm (3.9" ~ 24.0")
Table Surface to Spindle Ctr.	-100mm ~ 410mm (-3.9" ~ 16.1")	-200mm ~ 310mm (-7.9" ~ 12.2")
Spindle		
Spindle Taper	NST. No. 40	NST. No. 40
Spindle Speed	200 ~ 20,000min ⁻¹	20 ~ 15,000min ⁻¹ (20 ~ 20,000min ⁻¹ Opt.)
Drive Method	Built-In	Gear Drive, 4-Step
Max. Spindle Torque	118.0 N•m (87.0 ft•lbs)	273 N•m (201.3 ft•lbs) / 15 Min.
Spindle Motor	22kw (30 HP AC) / 15 min 18.5kw (25 HP AC) / Cont.	15kw (20 HP AC) / 15 min 11kw (15 HP AC) / 30 min. 7.5kw (10HP AC) / Cont.
Feed		
Rapid Feeds X, Y, Z	60m/min (2,362ipm)	50m/min (1,969ipm)
Feed Rates A / B-Axes	18,000 deg/min (50min ⁻¹)	2,400 deg/min (6.7min ⁻¹) / 12,000deg/min (33.3 min ⁻¹)
Cutting Feed Rates	0 ~ 60m/min (2,362ipm)	0 ~ 50m/min (1,969ipm)
APC		
Number of Pallets	20 (40, 80 Opt.)	20 (40, 80 Opt.)
ATC		
Tool Storage Capacity	174 Tools (230, 258, 314 Opt.)	140 Tools (190, 290 Opt.)
Tool Selection Method	Shortest Path, Fixed Pot	Random bi-directional, Fixed Pot
Tool Holder Style	MAS CT (BT) 40	MAS CT (BT) 40
Max. Tool Diameter	Ø95mm (Ø3.7") / Ø150mm (Ø5.9")	Ø95mm (Ø3.7") / Ø150mm (Ø5.9")
Max. Tool Length	350mm (13.7")	350mm (13.7")
Max. Tool Weight	10kg (22.0 lbs.)	10kg (22.0 lbs.)
Tool to Tool Change Time	1.3 seconds	2.1 seconds
Chip to Chip Change Time	2.5 seconds, min.	5.0 seconds, min.
Utilities		
Power Requirement	55 KVA, 200v AC, 3 Phase	45 KVA, 200v AC, 3 Phase
Air Requirement	0.5MPa, 350 L / min (90 psi, 13 cfm)	0.5MPa, 350 L / min (90 psi, 13 cfm)
Required Space (W x D)	3,835 x 6,006mm (151.0" x 236.5")	4,107 x 6,042mm (161.7" x 237.9")
Machine Height	2,682mm (106.6")	2,712mm (106.8")
Machine Net Weight	15,200kg (33,440 lbs.)	18,800kg (41,360 lbs.)
Control	Arumatik®-Mi	Arumatik®-Mi



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Specifications subject to change without notice.