5-Axis

Machining Centres

MAX 5

From print to part to profit





Ui

Trunnion-style 5 axis machining centres

- > VM10Ui
- > VM10Ui Plus
- > VMX30Ui
- > VMX30UDi
- > VMX30UHSi
- > VMX42Ui
- > VMX42UDi
- > VMX42UHSi



Benefits of a 5 axis trunnion machine

Easy transition from 3 axis machining. Using Hurco's unique "transform plane" conversational programming, 5 sided work can be programmed without the huge investment and learning required with a CAD/CAM system. A range of purpose built, structurally rigid machines cover a variety of capacity and table sizes.

Choose the Ui, UDi, or UHSi model variation depending upon your needs. Most popular is the 12,000 rpm, high torque VMXUi range for all general purpose work, however the 15,000RPM UDi range with in-line spindle offers performance advantages for high RPM, high feed-rate work, improving surface finish and thermal stability. These benefits can be taken a step further with the 20,000RPM motorised HSK63A Setco spindle on the UHSi range.



Table	VM10Ui	VM10Ui Plus	VMX30Ui/UDi	VMX30UHSi	VMX42Ui/UDi	VMX42UHSi
Working Surface (mm)	Ø 198	Ø 198	Ø 248	Ø 248	Ø 398	Ø 398
T-Slots (mm)	6 x 10 @ 60º	6 x 10 @ 60º	6 x 12 @ 60º	6 x 12 @ 60º	6 x 14 @ 60º	6 x 14 @ 60º
Max. Table Load (Kg)	150	150	200	200	250	250
Travels						
X-Axis (mm	533	533	762	762	1,067	1,067
Y-Axis (mm)	406	406	508	508	610	610
Z-Axis (mm)	483	483	520	520	520	520
A-Axis (º)	+30/-110	+30/-110	+30/-110	+30/-110	+30/-110	+30/-110
B-Axis (º)						
C-Axis (º)	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous
Spindle Motor						
Spindle Power (KW) Peak	11	11	13.4/15	35.0	18/15	35.0
Torque Peak (Nm) @ (rpm)	73.6 @ 1,450	60.4 @ 1,740	214 @ 600/ 95 @ 1,500	119 @ 2,800	239 @ 720/ 95 @ 1,500	119 @ 2,800
Spindle	BIG PLUS	BIG PLUS	BIG PLUS	Setco	BIG PLUS	Setco
Taper	CAT/BT 40	CAT/BT 40	CAT/BT 40	HSK63A	CAT/BT 40	HSK63A
Spindle Nose to Table (mm) Max	519	519	610	610	610	576
Spindle Speed Max (RPM)	10,000/(12,000*)	12,000	12,000/15,000	20,000	12,000/15,000	20,000
Toolchanger						
Stations	24	24	40 (60*)	40	40 (60*)	40
Max. Tool Diameter (mm)	80/(120*)	80/(120*)	76/(130*)	76/(130*)	76/(130*)	76/(130*)
Max. Tool Length (mm)	250	250	300	300	300	300
Max. Tool Weight (Kg)	7	7	7	7	7	7
Further Details						
Rapid Traverse (m/min) X/Y/Z Axis	28/28/28	28/28/28	38/38/32	45/45/40	38/38/32	45/45/40
Rapid Traverse (rpm) A/C Axis	25/25	25/25	25/25	25/25	25/25	25/25
Machine Weight (Kg)	3,360	3,360	5,280	5,990	7,200	7,760

*option

Further information and technical data on the product, see www.hurco.co.uk.
Machines shown with options. Prices and information may change without notice.

VCi and VCXi

5-Axis CNC mill with cantilever design

> VC500i
> VC600i
> VCX600i
> VCX600HSi



Benefits of the VCi and VCXi range

The large, integrated, rotary/swivel table is the ideal ergonomic design for access to complex 5 axis parts.

The rigid cast iron monobloc structure is optimized via static and dynamic finite element analysis (FEA)

The VCX600i is a faster, more dynamic model with larger travels and direct-drive torque motors on the B and C axes. The HSi version includes a 20,000RPM HSK63A motorised spindle.



	VC500i	VC600i	VCX600i	VCX600HSi
Table				
Working Surface (mm)	Ø 500	600 x 600	600 x 600	600 x 600
T-Slots (mm)	5 x 14 x 100	5 x 14 x 100	5 x 14 x 100	5 x 14 x 100
Max. Table Load (Kg)	250	350	350	350
Travels				
X-Axis (mm	520	820	820	820
Y-Axis (mm)	450	550	550	550
Z-Axis (mm)	400	500	500	500
A-Axis (°)	-	-	-	-
B-Axis (°)	-110/+110	-110/+110	-110/+110	-110/+110
C-Axis (°)	Continuous	Continuous	Continuous	Continuous
Spindle Motor				
Spindle Power (KW) Peak	13	17	16	35
Torque Peak (Nm) @ (rpm)	82 @ 1,500	107 @ 1,500	101 @ 1,500	118 @ 2,810
Spindle	BIG PLUS	BIG PLUS	BIG PLUS	Setco
Taper	CAT/BT 40	CAT/BT 40	CAT/BT 40	HSK63A
Spindle Nose to Table (mm) Max	550	650	650	650
Spindle Speed Max (RPM)	12,000	12,000	12,000	20,000
Toolchanger				
Stations	40	40 (60*)	40 (60*)	40 (60*)
Max. Tool Diameter (mm)	76 (130*)	76 (130*)	76 (154*)	76 (154*)
Max. Tool Length (mm)	300	300	300	300
Max. Tool Weight (Kg)	7	7	7	7
Further Details				
Rapid Traverse (m/min) X/Y/Z Axis	28/28/28	28/28/28	36/36/36	36/36/36
Rapid Traverse (rpm) A/C Axis	25/25	25/25	50/100	50/100
Machine Weight (Kg)	7,500	9,900	10,000	10,000

*option

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SRTi and SWi

B axis Swivel head machines

- VMX42SWi
- VMX42SRTi
- VMX42HSRTi
- VMX60SWi
- VMX60SRTi
- VMX60HSRTi
- VMX84SWi



Benefits of the SRTi Series

A swivel head, or "B" axis has substantial advantages over a traditional trunnion 5 axis machine in that less manipulation of the component is required.

Greater versatility – Available for use as a full-capacity 3 axis machine, when 5 axis parts aren't being made.

Heavier, or larger part capacity – Only vertical load bearing is required. Also, parts larger than the table can be machined. This size limit is only restricted by the internal enclosure.

Benefits of the SWi Series

For these models, the C axis is replaced with a conventional machine table to allow an A axis rotary table to be added, or heavier 4 axis work to be tackled.

Table	VMX42SWi	VMX42SRTi	VMX42HSRTi	VMX60SWi	VMX60SRTi	VMX60HSRTi	VMX84SWi
Working surface (mm)	1,270 x 610	1,270 x 610	1,270 x 610	1,676 x 660	1,676 x 660	1,676 x 660	2,184 x 865
Working surface rotary table (mm)		Ø 600	Ø 600		Ø 600	Ø 600	
T-Slots (mm)	5 x 18 x 100	5 x 18 x 100	5 x 18 x 100	6 x 18 x 100	6 x 18 x 100	6 x 18 x 100	7 x 18 x 125
Max. Table load (Kg)	1,750	1,360	1,360	2,000	1,360	1,360	2,268
Max. Table load rotary table (Kg)		500	500		500	500	
Travels							
X-Axis (mm)	1,067	1,067	1,067	1,524	1,524	1,524	2,134
Y-Axis (mm)	610	610	610	660	660	660	865
Z-Axis (mm)	610	610	610	610	610	610	762
B-Axis (°)	± 92	± 92	± 92	± 92	± 92	± 92	± 92
C-Axis (°)		Continuous	Continuous		Continuous	Continuous	
Spindle Motor							
Spindle Power Max (KW)	36.5	36.5	35	36.5	36.5	35	36.5
Torque Peak (Nm) @ (rpm)	118 @ 2,900	118 @ 2,900	83 @ 4,260	118 @ 2,900	118 @ 2,900	83 @ 4,260	118 @ 2,900
Spindle							
Taper	CAT/BT 40	CAT/BT 40	HSK-63A	CAT/BT 40	CAT/BT 40	HSK-63A	CAT/BT 40
Spindle Nose to Table (mm) Max	762	613	613	711	622	622	890
Spindle Speed Max (rpm)	12,000(16,000)	12,000(16,000)	24,000	12,000(16,000)	12,000(16,000)	24,000	12,000(16,000)
Toolchanger							
Stations	40 (60*)	40 (60*)	40 (60*)	40 (60*)	40 (60*)	40 (60*)	40
Max. Tool Diameter (mm)	76/(110*)	76/(110*)	76/(110*)	76/(130*)	76/(130*)	76/(130*)	76/(130*)
Max. Tool Length (mm)	250	250	250	250	250	250	250
Max. Tool Weight (Kg)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Further details							
Rapid travel (m/min) X/Y/Z Axis	38/38/32	38/38/32	45/45/40	32/32/24	32/32/24	45/45/40	18/18/13.5
Rapid Travel (RPM) B/C Axis	50/-	50/100	50/100	50/-	50/100	50/100	50/-
Machine Weight (Kg)	7,130	8,400	8,400	9,900	10,900	10,900	16,730

*option

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DCX5Si

Large double column 5 axis machines

> DCX32-5Si HSK63A
> DCX3226-5Si HSK-A100
> DCX42-5Si HSK-A100

Benefits of the DCX-5Si Series

The DCX range is perfect for very large components.

The addition of the 2 axis spindle head allows access to 5 sides of the part without the need for manipulation.

Two head options are available, depending upon application, a HSK63A 18,000RPM high-speed option and a high-torque HSK-A100 for heavier cutting.



Table	DCX32-5Si HSK63A	DCX32-26-5Si HSK-A100	DCX42-5Si HSK-A100
Working surface (mm)	3,000 x 1,700	3,000 x 2,100	4000 x 2100
T-Slots (mm)	7 x 22 x 220	9 x 22 x 220	9 x 22 x 220
Max. Table load (Kg)	11,000	14,000	16,000
Travels			
X-Axis (mm)	3,200	3,200	4,200
Y-Axis (mm)	2,100	2,450	2,450
Z-Axis (mm)	900	1,100	1,100
B-Axis (°)	± 110	± 110	± 110
C-Axis (°)	± 360	± 360	± 360
Spindle Motor			
Spindle Power Max (KW)	63	53	53
Torque Peak (Nm) @ (rpm)	106 @ 5,700	253 @ 2,000	253 @ 2,000
Spindle			
Taper	HSK-63A	HSK-A100	HSK-A100
Spindle Nose to Table (mm) Max	966	1301	1301
Spindle Speed Max (rpm)	18,000	12,000	12,000
Toolchanger			
Stations	40(60*)	40 (60*)	40(60*)
Max. Tool Diameter (mm)	76/(120*)	125 (250*)	125 (250*)
Max. Tool Length (mm)	300	300	300
Max. Tool Weight (Kg)	7.0	15.0	15.0
Further details			
Rapid travel (m/min) X/Y/Z Axis	15/15/10	15/15/10	12.5/12.5/10
Rapid Travel (RPM) B/C Axis	120/80	90/65	90/65
Machine Weight (Kg)	37,640	43,800	55,800

*option

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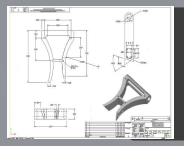
Max 5

From print to part to profit

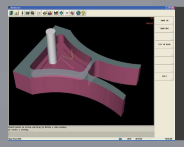
- > faster from drawing to finished part
- > shortest learning curve
- > fastest programming
- > intuitive operation
- > ergonomically designed



Sketch



Drawing



CAD/CAM



Desktop



DXF File



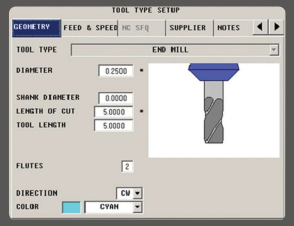
All Hurco machining centres incorporate a multi-core CPU to allow concurrent programming capabilities and high resolution 3D graphic display. A minimum of 2.7GHz Dual Core Intel i5 processor with 4GB RAM and 128 GB SSD Hard Drive supports the Windows operating system. All-digital internal communications and drives are able to respond precisely to the Ultimotion software, achieving 600 block look ahead and 2,277 block processing speed. Simple, easy to use interface accepts Hurco's popular Conversational, or Industry Standard NC programming as standard.

WinMax®

Faster from the drawing to the finished part

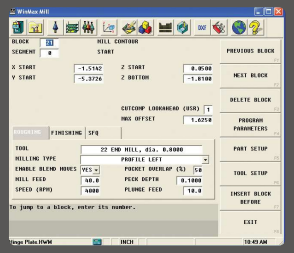
HURCO continues its reputation for technology innovation that yields measurable productivity gains for its customers because we're focused on your success. When we designed WinMax® control software, we focused on simplicity for the user. Less keystrokes, intuitive software, advanced graphics capabilities, and an enhanced graphical interface.

Conversational programming with WinMax® gets you from print to part faster than ever. Three steps and you're there.



Step 1: Setup

Setup is even easier with the WinMax® Tool & Material Library. Set up each tool one time and you're finished - the parameters are stored with the control so you just recall the tool the next time.



Step 2: Program

The graphical user interface of WinMax simplifies programming. Conversational programming with WinMax® will save you time and give you peace of mind - especially when you need to hire and train employees because it's easy to learn and easy to use.



Step 3: Verify

Advanced Verification Graphics with 3D solid rendering of the part, including dynamic rotation and real time tool display, make proving out the part a snap. View the part from any angle without the need to redraw it.

Now with Solid Model Import

WinMax Features and Options

- Interrupt cycle – Stop the program whenever you like to check the part or clean the tool. The machine will restart where you left off
- Data Block Search – Touch the feature that you need to edit on the graphics screen. The input screen will jump automatically to that part of the program
- Estimated run-time – Provides an accurate run-time estimate based on the feeds, speeds and tool-change times of that particular machine
- Concurrent programming – Program the next job, whilst simultaneously running your current job
- Math Assist – Draw the part geometry and the control will automatically calculate the intersection points for you.
- Select Surface Finish Quality – Maximise the surface finish and minimise the time spent cutting to suit your needs.
- Tool Change Optimization – Optimise the number of tool changes to minimise cycle times for conversational programs
- Ultimotion - High-speed contouring with look-ahead and data-smoothing standard on all Hurco machines
- ISNC – Industry standard compatibility for CAM programs
- Ultipocket – Unlimited islands within a pocket boundary, includes Helical ramp entry and Adaptipath, optimised CAM-style cutting routines*
- Conversational / NC Merge – Incorporate NC code as part of a conversational program*
- DXF – Take features, contours, hole positions direct from a DXF file. Save time, make less mistakes*
- Solid Model Import – Import STEP models direct into the control. Works great for 5-sided parts. Uses Hurco's transform plane software to rotate the part automatically. Includes Mill Surface 3D machining data blocks; surface machining direct from the model*

*Option (The above list is not exhaustive, book a demo to see the all available WinMax features)

United Kingdom and Ireland
12 Merlin Centre
Lancaster Road
Cressex Business Park
High Wycombe HP12 3TB
Tel: (01494) 442222
sales@hurco.co.uk
www.hurco.co.uk

South Africa
TH Machine Tools
102 Chopin St Melodie A/H
Hartbeespoort
South Africa 0216
Tel: +27 12 259 1375
sales@thmachinetools.co.za
www.thmachinetools.co.za

Sweden
AB Nordiska Wemag
Gottskarsvagen 150
SE-43994 Onsala
Sweden
Tel: +46 733887702
jh@nordiskawemag.se
www.hurcosverige.se

Israel
NR AUTOMATION
Shenhav 9
Yehud
6019000 Israel
Tel: 03-6342115
www.n-r.co.il
info@n-r.co.il

Estonia and Finland
Venten OÜ
Tala 2
11415 Tallinn
Tel: +372 668 2321
info@venten.ee
www.venten.ee

Greece
VIMA
Oik. Tetragono 51B,
DA7, B.I.P.E. Sindou,
Thessaloniki, Sindos 570 22, Greece
Tel; +30 2310 517-117
www.vimaco.gr
sales@vimaco.gr

Egypt
Setra Egypt
Professional Industrial Solutions
Ordonia Buildings, Building 16,
Office 1 Post No. 44466, Egypt
Tel: +201032752215
Email: Yasser@setraegypt.com
www.setraegypt.com

Denmark and Norway
CNC-TECH ApS
Bredgade 91, kl.
5560 Aarup - Denmark
Tel: +45 64 88 10 60
info@cnc-tech.dk
www.cnc-tech.dk

MACHINING CENTRES



TURNING CENTRES



5 AXIS



DOUBLE COLUMN



SUPERIOR CONTROLS

