

**3-axis** machining-centers

High-performance range | Highspeed range | Dual-column range

With the **most powerful** control in industry





## **3-axis** machining centers for high cutting performance

VMX 10 i	> VMX 50 i
VMX 24 i	> VMX 60 i
VMX 30 i	> VMX 64 i
VMX 42 i	> VMX 84 i



further information

www.hurco.eu

# Benefits of 3-axis machining-centers of the VMXi series

### The VMXi machining center is the workhorse of the industry

With the high velocities and accelerations of today's applications, machine performance must be carefully optimized in order to maintain accuracy over extended periods of time. The HURCO VMX Series of CNC mills delivers. It starts with a heavy, ribbed frame made of fine grain, high-grade cast iron. The double-nut, pre-tensioned ballscrews are anchored at both ends for increased accuracy and rigidity. A dual-wound 12K spindle delivers the cutting power you need. The linear rails on all HURCO machines are larger, and spaced for increased strength. But their quality goes far beyond mere size. We wedge lock the rails to a machined shoulder, which makes the machine more robust, instead of simply mounting them to a single surface. The multiple design and manufacturing details we incorporate into a HURCO VMC increase rigidity and reliability, which means each VMX machining center will be the workhorse you expect. We focus our efforts on reducing your overall cycle time while minimizing time wasted on non-cutting operations, by incorporating time-saving features in our VMX design and using premium components.

Prolonging Spindle Life + Preserving Accuracy. We have systems in place to prolong spindle life and combat spindle growth caused by heat dissipation. We use ceramic hybrid bearings in all VMX spindles (12K and faster). These bearings run at much lower temperatures, so they have a significantly longer lifespan and a much lower probability of failure. They are packed with lifetime grease, which promotes a maintenance-free lubrication system. In addition to using ceramic bearings, we use a coolant jacket that is designed into the frame's head casting to keep the spindle at an optimum temperature by stabilizing wide temperature variations and reducing heat dissipation. Because keeping the spindle and work area clean is vital to machine performance, we incorporate an upper and lower air-purge system to keep contaminants outside of the spindle.

Best-In-Class Chip Management. High pressure, high volume, stainless steel coolant ring with adjustable nozzles delivers coolant right to the tool. Dedicated large capacity pump system and scraper type lift-up conveyor with barrel height discharge eliminate costly cleanup and save valuable time. Sloped telescopic way covers protect the internal components of the machining center. Generous Tool Capacity ATC. Fully enclosed, side-mounted, swing-arm ATC gives you more room to work and has more tool capacity. The all electronic design provides the reliability, speed, and near-zero maintenance you require.

	VMX 10 i	VMX 24 i	VMX 30 i	VMX 42 i	VMX 50 i	VMX 60 i	VMX 64 i	VMX 84 i
Table								
Table working surface (mm)	760 x 405	760 x 510	1.020 x 510	1.270 x 610	1.500 x 660	1.680 x 660	1.680 x 890	2.180 x 865
T-Slots (DIN 650) (mm)	3 x 18 x 100	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	7 x 18 x 125	7 x 18 x 125
max. load (uniform distribution) (kg)	682	1.360	1.360	1.360	1.360	1.360	2.722	2.268
Travels								
X-Axis (mm)	660	610	760	1.067	1.270	1.525	1.625	2.135
Y-Axis (mm)	410	508	508	610	660	660	864	865
Z-Axis (mm)	510	610	610	610	610	610	760	760
Spindlemotor								
Spindlepower max. (KW)	11	9	13,4	18	18 / 22	18 / 22	18 /22	18 /22
Torque (Nm)	74	95	214	237	237 / 353	237 / 353	237 / 353	237 / 353
Spindle								
Taper	SK-40	SK-40	SK-40	SK-40	SK-40 / SK-50	SK-40 / SK-50	SK-40 / SK-50	SK-40 / SK-50
Distance Spindlenose – Table (mm)	100 – 610	150 – 760	150 – 760	150 – 760	150 – 760	100 – 710	150 – 910	150 – 910
Spindlespeed max. (rpm.)	10.000	12.000	12.000	12.000	12.000 / 8.000	12.000 / 8.000	12.000 / 8.000	12.000 / 8.000
Tool changer								
Stations	20	30	30 / 40	30 / 40	30 / 40 / 30	30 / 40 / 30	40 / 96 / 32	40 / 96 / 32
max. Tooldiameter (mm)	89	80	80 / 76	80 / 76	80 / 72 / 125	80 / 76 / 125	76 / 76 / 125	76 / 76 / 125
max. Toollength (mm)	250	300	300	300	300	300	300	300
max. Toolweight (kg)	7	7	7	7	7 / 15	7 / 15	7 / 15	7 / 15
Further Details								
Rapid travel (m/min.) X/Y/Z-Axis	24 / 24 / 24	35 / 35 / 30	35 / 35 /30	35 / 35 / 30	30 / 30 / 20	30 / 30 / 20	18 / 18 / 13,5	18 / 18 / 13,5
Machine weight (kg)	2.850	4.700	4.800 / 5.200	6.700 / 6.900	8.200 / 9.200	8.600 / 8.800 / 9.400	14.200 / 14.600 / 14.600	16.800 / 17.300 / 17.000

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



- > VMX 10 HSi
- > VMX 24 HSi
- > VMX 30 HSi
- > VMX 42 HSi

#### VMX HSi: If high speed is required

The HURCO VMXHSi high speed machining centers are equipped with the necessary components for speed, accuracy, and repeatability. The VMXHSi includes ABEC-7 ceramic hybrid bearings and an 18k base speed spindle, which gives you the speed you need and manages the thermal issues associated with high speed machining. The air over oil spindle lubrication distributes oil evenly and prevents bearings from grease starvation. The faster ATC decreases chip to chip time and has HSK tooling.

These machines are built to last and to retain accuracy with larger linear rails that are mounted to a machined shoulder for increased rigidity. Additionally, the rails are wed-ge-locked to the frame to reduce vibration instead of faster, cheaper face-milled process. The ball screws are stretched and pre-loaded, and have an additional anchor to the Z-axis.

Equipped with Yaskawa Sigma 5 drives, UltiMotion, and the latest WinMax V.9 control software, the VMX HSi mills are well worth the investment.

### Machine faster with the HURCO HS Series of High-Speed Mills. Integral spindle. Premium components. Built for speed. Built to last.

Our newest line of mills has the quality components and specifications you need to go fast. The VMXHSi high-speed machining centers combine all of the ergonomic design features and robustness of our proven VMX mills with components required for high speed machining.



further information

www.hurco.de

	VMX 10 HSi	VMX 24 HSi	VMX 30 HSi	VMX 42 HSi
Table				
Table working surface (mm)	762 x 406	760 x 510	1.020 x 510	1.270 x 610
T-Slots (DIN 650) (mm)	3 x 18 x 100	5 x 18 x 100	5 x 18 x 100	5 x 18 x 100
max. load (uniform distribution) (kg)	340	1.360	1.360	1.360
Travels				
X-Axis (mm)	660	610	762	1.067
Y-Axis (mm)	405	508	508	610
Z-Axis (mm)	510	610	610	610
Spindlemotor				
Spindlepower max. (KW)	8,5	35	35	35
Torque (Nm)	6	119	119	119
Spindle				
Taper	BT 30	HSK 63 A	HSK 63 A	HSK 63 A
Distance Spindlenose – Table (mm)	100 – 610	150 – 760	150 – 760	127 – 737
Spindlespeed max. (rpm.)	20.000	18.000	18.000	18.000
Tool changer				
Stations	20	30	30 / 40	40
max. Tooldiameter (mm)	60	80	80 / 76	76
max. Toollength (mm)	250	300	300	300
max. Toolweight (kg)	5	7	7	7
Further Details				
Rapid travel (m/min.) X/Y/Z-Axis	24 / 24 / 24	45 / 45 / 40	45 / 45 / 40	45 / 45 / 40
Machine weight (kg)	3.100	4.900	5.000	7.100

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## > DCX 22 i SK 40

> DCX 22 i SK 50

- > DCX 32 i SK 40
- > DCX 42 i SK 50

further information

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#### Double column for the BIG STUFF.

The DCX Series of CNC machining centers was created due to customer requests—customers who already knew the value of HURCO and needed larger machines for aerospace and energy parts. Our 2-meter and 3-meter VMCs are the biggest machine tools available with the powerful HURCO control.

When our customers requested a massive machining center that would accommodate the big parts their aerospace and energy customers were ordering, we knew the design and mechanical engineering was critical.

After reviewing various configurations, the HURCO engineering team opted for a double column design because they determined it would provide superior dynamic behavior and promote thermal stability compared to other options. The large table capacity allows nearly any part you have to be machined.



	DCX 22 i SK 40	DCX 22 i SK 50	DCX 32 i SK 50	DCX 42 i SK 50
Table				
Table working surface (mm)	2.100 x 1.600	2.100 x 1.600	3.000 x 1.700	4.000 x 2.100
T-Slots (DIN 650) (mm)	9 x 22 x 180	9 x 22 x 180	7 x 22 x 220	9 x 22 x 220
max. load (uniform distribution) (kg)	6.000	8.000	11.000	16.000
Travels				
X-Axis (mm)	2.200	2.200	3.200	4.200
Y-Axis (mm)	1.700	1.700	2.100	2.600
Z-Axis (mm)	750	750	920	1.100
Spindlemotor				
Spindlepower max. (KW)	18	26	60	60
Torque (Nm)	237 / 284	555	570	570
Spindel				
Taper	SK-40	SK-50	SK-50	SK-50
Distance Spindlenose – Table (mm)	150 – 900	150 – 900	164 - 1.084	160 – 1.260
Spindlespeed max. (rpm.)	12.000	6.000	6.000	6.000
Tool changer				
Stations	40	40	40	40
max. Tooldiameter (mm)	75	125	125	125
max. Toollength (mm)	300	300	300	300
max. Toolweight (kg)	7	15	15	15
Further Details				
Rapid travel (m/min.) X/Y/Z-Axis	24 / 24 / 24	15 / 15 / 12	15 / 15 / 10	12 / 12 / 10
Machine weight (kg)	20.000	20.500	35.000	50.900

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## WinMax<sup>®</sup> All in one: The most powerful control in industry

- faster from the drawing to the finished par
- shortest learning curve
- fastest programming
- quick overview by double scree
- designed ergonomically



DX

DXF file

## 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<sup>®</sup> 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<sup>®</sup> gets you from print to part faster than ever. Three steps and you're there.

- > Setup.
- > Program.
- > Verify.
- > Powerful software simplifies 5-sided programming.
- Reduce programming time by 80 percent with Swept Surface. Additional tool path strategies simplify 3D mold programming.
- Maximize surface finish and minimize time with Select Surface Finish Quality Machining.
- Eliminate bottlenecks with automated programming of DXF Transfer feature.
- Incorporate NC code into conversational programs with NC/Conversational Merge.
- Save time with Math Assist feature that automatically trigs out missing values.



#### Step 1: Setup

Setup is even easier with the WinMax  $^{\circ}$  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<sup>®</sup> 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.

- > Tool- und Materiallibrary 9.999 programmable tools
- > 3D-Plus\*
- > Tool change optimization with Conversational Programs\*
- > Conversitional NC-Merge\*
- > HURCO Ultimotion\*

\* optional

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## HURCO unlimited

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