

# Double-Column and Horizontal

## Machining Centers

Technical Brochure



With the fastest  
control in industry

# Max 5<sup>®</sup>

50 YEARS of INNOVATION  
**HURCO** 1966-2018

5-Axis  
Machining Centers



VM 10 Ui Plus



VM 10 UHSi Plus



VMX 30 Ui



VMX 30 UHSi



VMX 42 Ui



VMX 42 SWi



VMX 42 SRTi

3-Axis  
Machining Centers



VM 10 i



VM 10 i Plus  
VM 10 HSi Plus



VM 20 i



VM 20 i Plus



VM 30 i



VM 30 i Plus



VMX 24 i

Double-Column /  
Horizontal  
Machining Centers



BX 40 i



BX 50 i



DCX 22 i



DCX 32 i



DCX 32-5Si / DCX 32-5Sci



DCX 42 i

Turning  
Centers



TM 6 i



TM 8 i



TM 10 i



TM 12 i



TM 18 i / TM 18 Li



TMM 8 i



VMX 42 HSRTi



VMX 60 SWi



VMX 60 SRTi



VC 500 i



VCX 600 i



VTX Ui

## 5-Axis Machining Centers



VMX 30 i  
VMX 30 HSi



VMX 42 i  
VMX 42 HSi



VMX 50 i



VMX 60 i



VMX 64 i



VMX 84 i

## 3-Axis Machining Centers



HMX 500 i



HMX 630 i



HBMX 55 i



HBMX 80 i



HBMX 95-5i



HBMX 120 i

## Double- Column / Horizontal Machining Centers



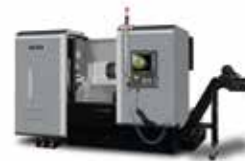
TMM 10 i



TMM 12 i



TMX 8i / TMX 10 i



TMX 8 MYi / TMX 10 MYi



TMX 8 MYSi / TMX 10 MYSi

## Turning Centers

# WinMax<sup>®</sup> All in one

Our control. Your expertise.



- > faster from the drawing to the finished part
- > shortest learning curve
- > fastest programming
- > quick overview by double screen
- > designed ergonomically



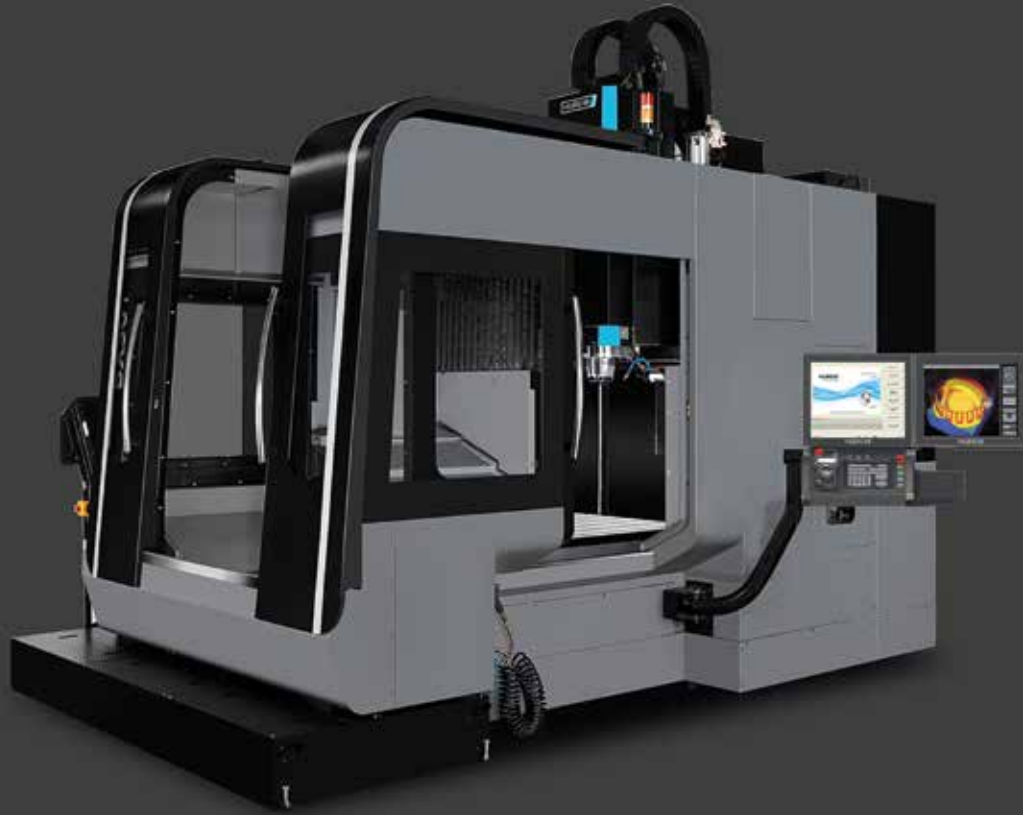
- >> Additional options: DXF, UltiMotion, Tool Change Optimization, die-mold package
- >> 2 x 19" screen
- >> Adjustable keypad angle
- >> ABS polycarbonate keys withstand petroleum solvents
- >> Override knobs for speed, feed and rapid feed
- >> Retractable QWERTY keyboard with trackball
- >> Dual USB ports
- >> Retractable console for minimum footprint\*
- >> Folding auxiliary screen with stainless steel hinges\*
- >> LCD remote jog unit \*
- >> CPU: Intel® Core™ i5 - Processor
- >> RAM: 4 GB
- >> SSD: 80 GB
- >> Maximum feed rate: 30,500 mm/min\*

\*depending on machine and contour

# BXi Series

High-Speed Double-Column  
Machining Centers

HURCO's BXi double-column series  
for high-speed machining

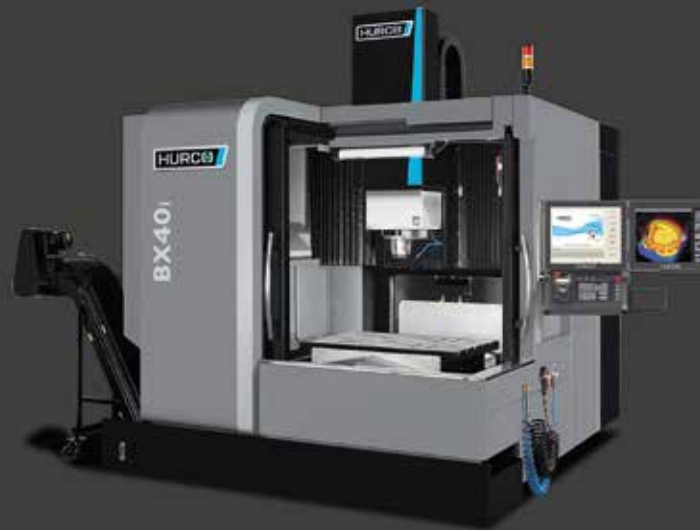


- > Built for high-precision parts with excellent surface finish
- > Accuracy: Robust and rigid double-column design promotes high thermal stability

OPTION: Patented UltiMotion technology option available. Invented by HURCO. Simultaneously reduce cycle time by up to 30 % (or more) and improve surface finish quality with UltiMotion. Exclusive technology only available on HURCO mills.

STANDARD & OPTIONAL ITEMS	BX 40 i	BX 50 i
Spindle chiller	S	S
Remote jog unit	S	S
Extra wide linear guide ways	S	S
Ultra-rigid roller guideways	S	S
Double-nut pretensioned ball screws	S	S
Direct measuring system (X, Y, Z)	S	S
Automatic central lubrication system	S	S
Oil skimmer	S	S
Status signal light	S	S
Exchange arm ATC	S	S
Scraper conveyor	S	S
Enclosure wash down system	S	S
Coolant & air gun	S	S
Programmable air blow	O	O
Coolant thru spindle / 30 bar	S	S
LED work light(s)	S	S
Power cabinet heat exchanger	S	S
Renishaw part probing	O	O
Renishaw tool probing	O	O

O: optional | S: standard

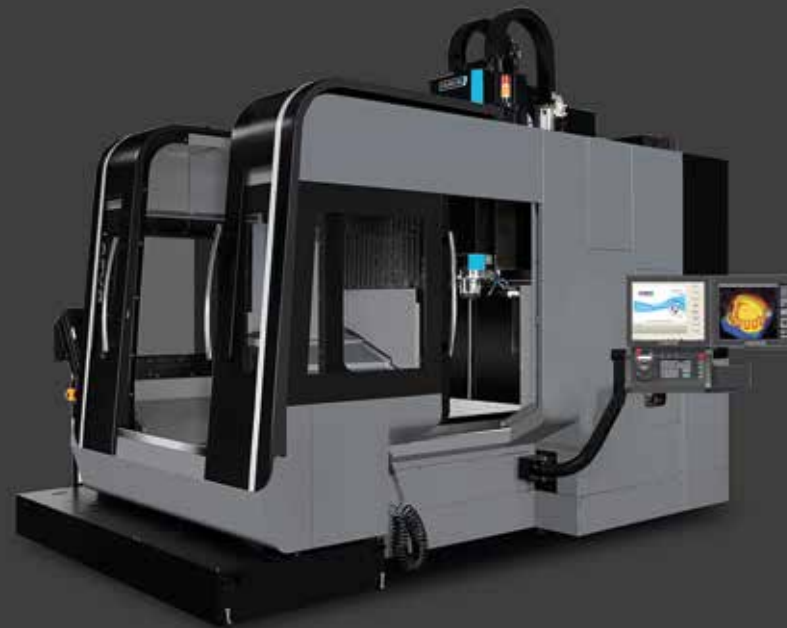


## BX 40 i

High speed and accuracy  
for tight tolerances

- >> 1,050 x 700 mm table, 1,000 kg capacity
- >> 1,020 x 700 x 500 mm travels
- >> 18,000 rpm spindle
- >> 35 kW peak spindle
- >> 30 or 50 station automatic tool changer
- >> 39 / 39 / 39 m/min rapid traverse rates





## BX 50 i

Stability combined with exceptional accuracy and outstanding surface finish capabilities

- >> 1,500 x 960 mm table, 2,500 kg capacity
- >> 1,350 x 900 x 600 mm travels
- >> 18,000 rpm spindle
- >> 35 kW peak spindle
- >> 30 or 50 station automatic tool changer
- >> 39 / 39 / 39 m/min rapid traverse rates

# DCXi Series

HURCO's largest  
machining centers

Premium components  
and expert design



- >> Ease of access and huge travels for the X-, Y- and Z-axis provide the ability to machine large and heavy parts
- >> Heavy duty linear rails for X-, Y- and Z-axis with SK-40 taper or for X- and Y-axis with SK-50 taper (heavy duty box ways for Z-axis with SK-50 taper)
- >> High-performance spindles allow the use of the latest machine tool technologies
- >> Solid cast iron frame

OPTION: Patented UltiMotion technology option available.  
Invented by HURCO. Simultaneously reduce cycle time by up to  
30 % (or more) and improve surface finish quality with UltiMotion.  
Exclusive technology only available on HURCO mills.

STANDARD & OPTIONAL ITEMS	DCX 22 i	DCX 32 i DCX 32-5 Si DCX 32-5 SCi	DCX 42 i
Dual wound AC spindle motor	S	S	S
Spindle chiller	O	S	S
Remote jog unit	S	S	S
Extra wide linear guide ways	S	S	S
Ultra-rigid roller guideways	S	S	S
Double-nut pretensioned ball screws	S	S	S
Direct measuring system (X, Y, Z)	O	O	O
Automatic central lubrication system	S	S	S
Oil skimmer	O	O	O
Status signal light	S	S	S
Exchange arm ATC	S	S	S
Chip Conveyor	S	S	S
Scraper conveyor	S	S	S
Enclosure wash down system	S	S	S
Coolant & air gun	S	S	S
Spindle coolant ring	S	S	S
Programmable air blow	O	O	O
Coolant thru spindle / 20 bar	O	O	O
Oversized hinged side access door(s)	S	S	S
LED work light(s)	S	S	S
Power cabinet heat exchanger	S	S	S
Renishaw part probing	O	O	O
Renishaw tool probing	O	O	O

O: optional | S: standard



## DCX 22 i

2-meter  
double-column  
machining center

- >> 2,100 x 1,600 mm table
- >> Travels: 2,200 x 1,700 x 750 mm
- >> 6,000 kg capacity with SK-40 taper  
and 8,000 kg capacity with SK-50 taper
- >> 12,000 rpm spindle with SK-40 taper  
or 6,000 rpm spindle with SK-50 taper  
(8,000 rpm spindle option)
- >> 18 kW peak spindle with SK-40 taper
- >> 26 kW peak spindle with SK-50 taper
- >> 40 station automatic tool changer
- >> 24 / 24 / 24 m/min rapid traverse rates with SK-40 taper  
or 15 / 15 / 12 m/min rapid traverse rates with SK-50 taper



## DCX 32 i

3-meter  
double-column machining  
center

- >> 3,000 x 1,700 mm table
- >> Travels: 3,200 x 2,100 x 920 mm
- >> 11,000 kg capacity
- >> 6,000 rpm spindle
- >> 60 kW peak spindle
- >> 40 station automatic tool changer
- >> 15 / 15 / 10 m/min rapid traverse rates



**DCX 32-5Si**  
**DCX 32-5SiCi**

3-meter double-column  
machining center with swivel  
head for 5-axis capability

- >> 3,000 x 1,700 mm table
- >> Travels: 3,200 x 2,000 x 900 mm
- >> 11,000 kg capacity
- >> 18,000 rpm spindle
- >> 54 kW peak spindle
- >> 40-station automatic-tool-changer
- >> 15 / 15 / 10 m/min rapid traverse rates



**DCX 42 i**

4-meter  
double-column  
machining center

- >> 4,000 x 2,100 mm table
- >> Travels: 4,200 x 2,600 x 1,100 mm
- >> 16,000 kg capacity
- >> 6,000 rpm spindle
- >> 60 kW peak spindle
- >> 40-station automatic-tool-changer
- >> 12.5 / 12.5 / 10 m/min rapid traverse rates

# HMXi / HBMXi Series

4-Axis Machining Centers

Power, speed and unbeatable value –  
the ideal machine for medium sized 5-axis parts



## HMXi Series

- >> Liquid-cooled motorized spindle
- >> Heavy duty linear rails in all three axes
- >> B-axis as a full NC-axis for machining complex parts
- >> Two-pallet system
- >> Solid cast iron frame



#### HBMXi Series

- >> Geared spindle
- >> Hardened box ways
- >> B-axis as a full NC-axis for machining complex parts
- >> Solid cast iron frame

OPTION: UltiMotion technology option available.  
Invented by HURCO. Simultaneously reduce cycle time  
by up to 30 % (or more) and improve surface finish  
quality with UltiMotion.  
Exclusive technology only available on HURCO mills.

STANDARD & OPTIONAL ITEMS	HMX 500 i	HMX 630 i	HBMX 55 i	HBMX 80 i	HBMX 95 -5i	HBMX 120 i
Spindle chiller	S	S	S	S	S	S
Spindle air purge and blast	S	S	S	S	S	S
Remote jog unit	S	S	S	S	S	S
Extra wide linear guide ways	S	S	—	—	—	—
Hardened box ways	—	—	S	S	S	S
Double-nut pretensioned ball screws	S	S	S	S	S	S
Direct measuring system (X, Y, Z)	O	O	S	S	S	S
Automatic central lubrication system	S	S	S	S	S	S
Exchange arm ATC	S	S	S	S	S	S
ATC extension option	O	O	O	O	O	O
Scraper conveyor	S	S	—	—	—	—
Enclosure wash down system	S	S	—	—	—	—
Ceiling shower coolant	S	S	—	—	—	—
Wash down & air gun	S	S	S	S	S	S
Coolant ring	S	S	—	—	—	—
Coolant thru spindle	S	S	S	S	S	S
LED work light(s)	S	S	S	S	S	S
Power cabinet heat exchanger	S	S	S	S	S	S
Renishaw part probing	O	O	O	O	O	O
Renishaw tool probing	O	O	O	O	O	O

O: optional | S: standard





## HMX 500 i

Horizontal machining  
with efficient and fast chip  
management

- >> 500 x 500 mm table, 500 kg capacity
- >> Travels: 813 x 610 x 643 mm
- >> 12,000 rpm spindle with SK-40 taper or 8,000 rpm spindle with SK-50 taper
- >> 48 kW peak spindle with SK-40 taper or 56 kW peak spindle with SK-50 taper
- >> 60- or 96-station automatic-tool-changer
- >> 45 / 45 / 40 m/min rapid traverse rates



## HMX 630 i

HURCO 's largest  
horizontal  
machining center

- >> 630 x 630 mm table, 1,200 kg capacity
- >> 1,050 x 900 x 1,000 mm travels
- >> 8,000 rpm spindle
- >> 56 kW peak spindle
- >> 60- or 96-station automatic-tool-changer
- >> 40 / 40 / 40 m/min rapid traverse rates



## HBMX 55 i

Efficiency and precision  
at the highest technical level.

- >> 1,120 x 1,250 mm table, 4,000 kg capacity
- >> 1,400 x 1,390 x 1,100 mm travels
- >> 2,500 rpm spindle
- >> 30 kW peak spindle
- >> 60- or 90-station automatic-tool-changer
- >> 10 / 10 / 10 m/min rapid traverse rates



## HBMX 80 i

Large work envelope  
and small foot print

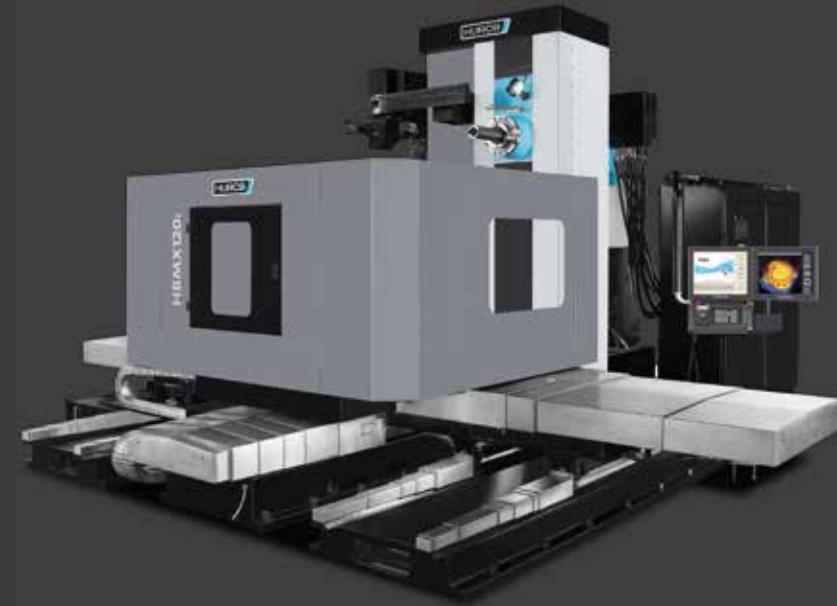
- >> 1,440 x 1,600 mm table, 6,300 kg capacity
- >> 2,400 x 2,100 x 1,500 mm travels
- >> 2,500 rpm spindle
- >> 30 kW peak spindle
- >> 60- or 90-station automatic-tool-changer
- >> 10 / 10 / 10 m/min rapid traverse rates



## HBMX 95-5i

Boring mill all-rounder  
in specialty machining  
centers

- >> 1,800 x 2,000 mm table, 10,000 kg capacity
- >> 2,400 x 2,100 x 1,500 mm travels
- >> 1,500 rpm spindle
- >> 30 kW peak spindle
- >> 60- or 90-station automatic-tool-changer
- >> 10 / 10 / 10 m/min rapid traverse rates



## HBMX 120 i

High speed, flexibility and  
improved product quality

- >> 1,440 x 1,600 mm table, 6,300 kg capacity
- >> 3,000 x 1,780 x 1,650 travels
- >> 1,500 rpm spindle
- >> 30 kW peak spindle
- >> 60- or 90-station automatic-tool-changer
- >> 10 / 10 / 10 m/min rapid traverse rates

	BX 40 i	BX 50 i	DCX 22 i SK-40 / Sk-50	DCX 32 i	DCX32-5Si DCX 32-5SiCi	DCX 42 i
<b>Table</b>						
Table working surface (mm)	1.050 x 700	1.500 x 960	2.100 x 1.600	3.000 x 1.700	3.000 x 1.700	4.000 x 2.100
Max. load (kg)	1.000	2.500	6.000 / 8.000	11.000	11.000	16.000
Spindle nose to table min/max (mm)	178 / 678	180 / 780	152 – 902	164 – 1.084	66 – 966	160 – 1.260
T-slots (mm)	6 x 18 x 125	6 x 22 x 160	9 x 22 x 180	7 x 22 x 220	7 x 22 x 220	9 x 22 x 220
Pallet hole matrix	1.080	1.060	1.750	2.130	2.130	2.540
<b>Travels</b>						
X-axis (mm)	1.020	1.350	2.200	3.200	3.200	4.200
Y-axis (mm)	700	950	1.700	2.100	2.000	2.600
Z-axis (mm)	500	600	750	920	900	1.100
B-axis (°)	—	—	—	—	105	—
W-axis (mm)	—	—	—	—	185 / 360	—
<b>Spindle</b>						
Max. spindle speed (rpm) / taper	18.000 / HSK 63 A	18.000 / HSK 63 A	12.000 / Sk-40 (8.000 / Sk-50)	6.000 / Sk-50	18.000 / HSK63A	6.000 / Sk-50
Spindle power (kW @ rpm)	35 @ 2.800	35 @ 2.800	18 @ 720 / 26 @ 458	60 @ 1.000	54 @ 8.000	60 @ 1.000
Spindle torque (Nm)	119 @ 2.800	119 @ 2.800	237 / 544	570	85	570
Spindle quill diameter (mm)	—	—	—	—	—	—
<b>Automatic tool changer</b>						
Tool capacity (optional)	30 (50)	30 (50)	40	40	40	40
Max. tool diameter (mm)	75	75	75 / 125	125	76	125
Max. tool length (mm)	300	300	300	300	300	300
Max. tool weight (kg)	7	7	7 / 15	15	7	15
Tool to tool ATC time (s)	—	—	5	5	5	5
<b>Feed rate</b>						
Rapid traverse XYZ (m/min)	39 / 39 / 39	39 / 39 / 39	24 / 24 / 24 oder 15 / 15 / 12	15 / 15 / 10	15 / 15 / 10	12,5 / 12,5 / 10
Progr. feed rate (m/min)	39	30	20 / 12	10	10	12,5 / 12,5 / 10
B-axis max. RPM	—	—	—	—	—	—
W-axis (m/min)	—	—	—	—	—	—
<b>Further details</b>						
Machine weight (kg)	9.100	13.000	20.000 / 20.510	34.940	36.770	50.900

	HMX 500 i Sk-40 / Sk-50	HMX 630 i	HBMX 55 i	HBMX 80 i	HBMX 95 -5i	HBMX 120 i
<b>Table</b>						
Table working surface (mm)	2 x 500 x 500	2 x 630 x 630	1.120 x 1.250	1.440 x 1.600	1.800 x 2.000	1.440 x 1.600
Max. load (kg)	500	1.200	4.000	6.300	10.000	6.300
Spindle nose to table min/max (mm)	148 – 790 / 80 - 722	155 – 1.155	- 45 – 1.555	130 – 2.280	848 – 2.348	130 - 2.280
T-slots (mm)	—	—	7 x 24 x 160	9 x 24 x 160	9 x 28 x 185	9 x 24 x 160
Distance between columns (mm)	24 x M16 x 100	24 x M16 x 125	—	—	—	—
<b>Travels</b>						
X-axis (mm)	813	1.050	1.400	2.000	2.400	3.000
Y-axis (mm)	610	900	1.390	1.780	2.100	1.780
Z-axis (mm)	643	1.000	1.100	1.650	1.500	1.650
B-axis (°)	360	360	360	360	360	360
C-axis (°)	—	—	500	500	900	500
<b>Spindle</b>						
Max. spindle speed (rpm) / taper	12.000 / Sk-40 oder 8.000 / Sk-50	8.000 / Sk-50	454 / 2.500 / Sk-50	454 / 2.500 / Sk-50	350 / 1.500 / Sk-50	454 / 2.500 / Sk-50
Spindle power (peak) (kW @ rpm)	48 @ 2.500 / 56 @ 1.200	56 @ 1.200	30 @ 695,5	30 @ 695,5	30 @ 383	30 @ 695,5
Spindle torque (peak) (Nm)	183,2 / 445,1	445,1	1.500	1.500	2.500	1.500
Spindle quill diameter (mm)	—	—	110	110	135	110
<b>Automatic tool changer</b>						
Stations	60 / 60	60	60	60 (90)	60 (90)	60 (90)
Max. tool diameter (mm)	80 / 125	125	120	120	120	120
Max. tool length (mm)	300 / 450	450	400	400	400	400
Max. tool weight (kg)	7 / 20	20	25	25	25	25
Tool to tool ATC time (s)	4,9 / 6	6	15	15	15	15
<b>Feed rate</b>						
Rapid traverse XYZ (m/min)	45 / 40 / 45	40 / 40 / 40	10 / 10 / 10	10 / 10 / 10	10 / 10 / 10	10 / 10 / 10
Progr. feed rate (m/min)	40	35	7,6 / 4	7,6 / 4	7,6 / 4	7,6 / 4
B-axis max. RPM	16,6	16,6	1	1	1	1
C-axis (mm)	—	—	4	4	4	4
<b>Further details</b>						
Machine weight (kg)	17.837	25.800	19.200	23.500	26.000	25.500

## HURCO Conversational Programming

- >> AdaptiPath™ (Adaptive Trochoidal Milling)
- >> NC/Conversational Merge
- >> 100 Work Offsets (G Code)
- >> Tool Change Optimization
- >> DXF and 3D DXF Transfer
- >> Solid Model Import (STEP)
- >> Context Sensitive Help
- >> Program Manager Function
- >> Inch-Metric Toggle
- >> Program Review with Cut/Copy/Paste
- >> Mill Cycles (with AutoCalc Function)
  - >> Lines & Arcs
  - >> Circle
  - >> Frame
  - >> Mill Face
  - >> Swept Surface with 3D Mold
  - >> Thread Milling
  - >> Slot
  - >> Stick Lettering
  - >> TrueType® Lettering
  - >> Serial Number Lettering  
(Lettering and Part Serialization)
- >> Pocketing with unlimited islands
- >> Drill Cycles
  - >> Drilling (Toll Retract / Chip Breaker)
  - >> Rigid Tapping with Pecking
  - >> Bore Orient
  - >> Deep Hole Drilling
  - >> Custom Drill Cycle
- >> Program Parameters
  - >> Programmable Roughing Stock Allowance
  - >> Safety Zone Selection
  - >> Helix Plunging Cycle
- >> Pattern Blocks
  - >> Loop Rotate
  - >> Mirror Image
  - >> Loop Rectangular
  - >> Loop Translate

## NC Programming

- >> NC Editor
- >> 99 Work Offsets (G-Code)
- >> Fanuc0-compatibility
- >> G Codes
- >> M Codes

## 5-Axis

- >> Automatic Safe Repositioning
- >> 3-D Tool Compensation
- >> Rotary Axes Centerline Probing
- >> Shortest Angular Traverse
- >> Tool Center Point Management
- >> Tool Path Linearization
- >> Transform Plane
- >> Tool Vector Canned Cycles
- >> Tool Vector Input & Retract

## Tool Management

- >> Tool and Material Library
- >> Tool Management (Database Interfaces)
- >> Tool Life Monitoring
- >> Toll Probing with Laser\* or Touch Probe\*
- >> Advanced Tool Utilities and Settings

## Review and Verification Graphics

- >> Remote Maintenance
- >> Automatic Error Check
- >> Advanced Verification Graphics with 3D Solid Rendering
- >> Fast Draw Graphics Engine
- >> Graphics Display (Tool Path, Solids, Projection in 3 Planes, Isometric)
- >> Graphical Code Search
- >> Real Time Tool Simulation
- >> Individual Stock Geometry (STL)

## Automatic Mode

- >> Customizable Digital Readout Overlay (DRO)
- >> Auto Interrupt Cycle
- >> Cycle Start / Feed Hold
- >> Control and Machine Diagnostics
- >> Coolant Select (Dual)
- >> Distance To Go
- >> Estimated Run Time
- >> Feed Rate, Rapid Traverse and RPM Override
- >> Spindle Load Monitor
- >> Concurrent Programming
- >> Speed and Feed Edit while Running
- >> Job List
- >> UltiMotion™

The points marked with a \* are optional



Knoll  
Product Package



Knoll  
Bypass filter



Rotoclear  
inspection windows



LCM rotary unions  
for rotary tables



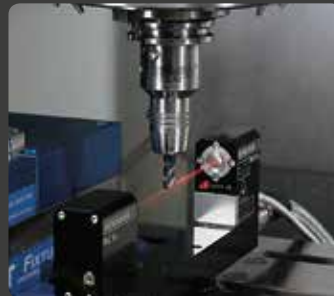
Barnes  
chip conveyor



Part Probing  
with touch probe



Tool probing with  
touch probe



Tool probing with  
laser beam



Accu-Lube minimum-  
quantity lubrication



Air through spindle



Air through nozzles

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<b>A</b>	HURCO GmbH www.hurco.de
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<b>BIH</b>	Strojotehnika d.o.o. www.hurco.eu
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<b>B</b>	HURCO GmbH www.hurco.nl
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<b>BG</b>	VEDI International Ltd. www.hurco.bg
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<b>CZ</b>	ITAX PRECISION s.r.o. www.itax.cz www.hurco.cz
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<b>E</b>	Ferrotall www.hurco.es
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<b>FL</b>	Josef Binkert AG www.binkertag.ch
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<b>H</b>	Single Product kft www.hurco.hu
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<b>HR</b>	Strojotehnika d.o.o. www.hurco.com.hr
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<b>LT</b>	Machine Tool Center UAB www.mtcenter.fi
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<b>LV</b>	Machine Tool Center UAB www.mtcenter.fi
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<b>MNE</b>	Strojotehnika d.o.o. www.hurco.eu
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<b>NL</b>	HURCO GmbH www.hurco.nl
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<b>P</b>	Kinetic Approach www.hurco.pt
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<b>PL</b>	HURCO Sp. Z o.o. www.hurco.pl
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<b>RO</b>	SC Allmetech Tools&Machines SRL www.hurco.ro
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<b>RU</b>	ILK-Engineering www.ilk.ru
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<b>SRB</b>	Strojotehnika d.o.o. www.hurco.eu
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<b>SLO</b>	Kač Trade d.o.o. www.hurco.eu
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<b>SK</b>	ITAX PRECISION s.r.o. www.itax.cz www.hurco.cz
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<b>UA</b>	Zenitech www.hurco.com.ua
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