



GETTING STARTED WITH WINMAX MILL

**Dual Screen and Max Consoles
for Hurco Machining Centers**

TABLE OF CONTENTS

Using This Manual	xiii
Sample Screens	xiii
Using the Touch Screen	xv
Printing	xv
Icons	xv
Using the On-screen Help	xvi
Accessing the On-screen Help in PDF format	xvii
 Machine and Console Basics	1 - 1
Machine Components	1 - 2
Consoles	1 - 3
WinMax Interface Environment	1 - 4
Edit Mode	1 - 4
Softkeys	1 - 5
Drop-down Lists	1 - 5
Expand and Collapse Files	1 - 6
Pop-ups	1 - 6
Status Bar	1 - 7
Calculator	1 - 8
On-screen Help	1 - 8
Accessing the WinMax Help in PDF format	1 - 9
Control Panel Function Groups	1 - 10
Emergency Stop Buttons	1 - 12
Programming Keyboard	1 - 12
Text Screen Data Entry	1 - 12
Programming Mode	1 - 12
Text Screen Cursor Control Keys	1 - 13
Numeric Keypad	1 - 13
Optional Computer Keyboard	1 - 13
Axis, Spindle, and Machine Control	1 - 14
Override Knobs	1 - 14
Jog Unit	1 - 15
Setting Jog Unit Parameters	1 - 17
Machine Control	1 - 18
Machine Operations Keys	1 - 19
Machine Mode	1 - 19
Stop Motion	1 - 19
Spindle	1 - 20
Tool Changer	1 - 20
Coolant	1 - 20
Communications Panel	1 - 21
RS-232C Serial Port	1 - 21
Indexer Port	1 - 22
Network Port	1 - 22
USB Port	1 - 22
Automatic Tool Changers	1 - 23
Loading a Tool into the Spindle	1 - 23
Unloading a Tool from the Spindle	1 - 23
Loading Tools into the ATC Magazine	1 - 24
Removing Tools from the ATC Magazine	1 - 25

Large Tools in the ATC Magazine	1 - 25
Machine Start Up and Shut Down	1 - 26
Calibrate Machine	1 - 26
Establishing Servo Power	1 - 26
Axes Calibration	1 - 26
Warm Up Machine	1 - 26
Reset Master	1 - 27
Recovery and Restart	1 - 27
Shut Down Techniques	1 - 28
Emergency Stop	1 - 28
Park Machine	1 - 28
Control Power Off Timer	1 - 29
Program Manager	2 - 1
Managing Program Files	2 - 1
Program Properties	2 - 4
Disk Operations	2 - 5
FTP Manager	2 - 6
FTP Host List	2 - 7
FTP Host Properties	2 - 7
Utilities	3 - 1
System Configuration	3 - 2
Display WinMax Configuration	3 - 2
Display Machine Specifications	3 - 2
Backup Config & Machine Files	3 - 3
Restore Config & Machine Files	3 - 3
User Preferences	3 - 3
User Interface Settings	3 - 4
Conversational Settings	3 - 5
NC Settings	3 - 5
Autosave Settings	3 - 6
Tool Utilities and Settings	3 - 6
Tool Information Printing	3 - 8
Import and Export	3 - 10
Machine Parameters	3 - 11
Machine Parameters Page 1	3 - 11
Coolant Parameters	3 - 13
Coolant Delay Time	3 - 13
Pulsating or Delay Washdown Enable	3 - 14
Alt Washdown Dwell	3 - 15
Alt Dwell Lt Side	3 - 16
Alt Washdown Off Time	3 - 16
Washdown On Delay Timer	3 - 17
Washdown Off Delay Timer	3 - 17
Control Power Off Time	3 - 19
Disable Tool Picker Option	3 - 19
Machine Parameters Page 2	3 - 19
Cal to LS Velocity Parameters	3 - 21
Auto Balance Enable	3 - 21
ATC and Rapid Override Disable Parameters	3 - 21
ATC Disable	3 - 21
Rapid Override Disable	3 - 22
Axis Safety Position Parameters	3 - 22
Tilt Axis Safety Position	3 - 22

X-Axis and Y-Axis Safety Position	3 - 22
ATC Z-Axis Parameter	3 - 23
ATC Z-Axis Move to Zero Position	3 - 23
Machine Parameters Page 3	3 - 23
Aux Output Parameters	3 - 24
Aux Output 1, 2, 3, 4 Confirmation Enable	3 - 24
Disable Aux Out 1, 2, 3, 4 During Interrupt	3 - 24
Move to Safety Pos Manual Mode ATC	3 - 25
Chip Conveyor Parameters	3 - 25
Chip Conveyor On/Off Delay Enable	3 - 25
Chip Conveyor On Delay Time	3 - 26
Chip Conveyor Off Delay Time	3 - 26
Machine Parameters Page 4	3 - 26
Warm Up Parameters	3 - 27
Serial Port Settings	3 - 28
FTP Server Settings	3 - 28
WinMax Uptime	3 - 29
Select Language	3 - 29
Language Registration	3 - 29
Data Logging Filters	3 - 29
Additional Utilities Softkeys	3 - 30
Printing Setup	3 - 30
Part Program Printing	3 - 30
Probing Data Printing	3 - 31
Integrator Support Services	3 - 31
Serial I/O	3 - 31
Log Files	3 - 32
Active Error Listing	3 - 32
Active Status Listing	3 - 32
Error History	3 - 33
Status History	3 - 33
Retrieve Log and Diagnostic Files	3 - 34
Export Log	3 - 34
Programming Basics	4 - 1
Input Mode	4 - 2
Erase Functions	4 - 2
Part Setup	4 - 3
Part Setup Coordinate Systems	4 - 5
Machine Coordinate System	4 - 5
Unrotated Coordinate System	4 - 5
Workpiece Coordinate System	4 - 5
5-Axis Part Setup Fields	4 - 7
Part Setup Fields	4 - 8
Part Setup Softkeys	4 - 10
Part Fixturing and Tool Loading	4 - 10
Work Offsets	4 - 11
Auxiliary Work Offsets	4 - 12
Stock Geometry	4 - 13
Tool Setup	4 - 14
Tool Setup Softkeys	4 - 14
Tool Setup Fields	4 - 16
Advanced Tool Settings	4 - 19
Tool Geometry	4 - 19
Feed and Speed	4 - 22

Feed and Speed Calculations	4 - 23
Speed Formulas	4 - 23
Feed Formulas	4 - 24
NC SFQ	4 - 24
Supplier	4 - 24
Notes	4 - 25
Edit Apt Parameters	4 - 25
Creating Tool Setup Templates	4 - 26
Create a Tool Template	4 - 26
Rename an Existing Tool Template	4 - 26
Use the Restore Function to Add an Existing Template's Tool Setup	4 - 26
Zero Calibration	4 - 26
Part Program Tool Review	4 - 27
Tool Matching	4 - 28
Tool Matching Results	4 - 29
Tool Management	4 - 30
Spindle	4 - 30
Auto	4 - 30
Manual	4 - 31
Tool and Material Database	4 - 32
Program Parameters	4 - 33
General Parameters 1	4 - 34
General Parameters 2	4 - 35
Milling Parameters 1	4 - 36
Milling Parameters 2	4 - 39
Holes Parameters	4 - 40
Probing Parameters	4 - 41
Performance Parameters	4 - 42
Import Functions	4 - 43
Conversational Components	4 - 43
NC States	4 - 43
Importing NC States into Conversational Programs	4 - 44
Copy and Change Blocks	4 - 45
Copy, Move, or Delete Blocks	4 - 46
Modify Dimensions	4 - 46
Changing Feeds, Speeds, and Tools	4 - 47
Change Surface Finish Quality	4 - 47
Review Mode	4 - 48
Auto Mode	4 - 50
Auto Mode Monitoring	4 - 51
Manual Mode	4 - 53
Automatic Tool Changer	4 - 54
VM Tool Magazine	4 - 54
Types of Automatic Tool Changers (ATC)	4 - 54
40-Taper ATC with 24- or 40-Station Tool Magazine	4 - 54
ATC Sequence	4 - 54
50-Taper ATC with 30 or 32-Station Tool Magazine	4 - 56
HTX500 and VTXU Tool Magazine	4 - 57
HTX500 Machine	4 - 57
VTXU Machine	4 - 57
ATC and Machine Diagnostics	4 - 58
HTX500 Machine and ATC Diagnostics	4 - 58
HTX500 ATC Status Condition	4 - 59
HTX500 ATC Diagnostics Softkeys	4 - 60
HTX500 ATC Diagnostics Softkey Descriptions, Page 1	4 - 61

HTX500 ATC Diagnostics Softkey Descriptions, Page 2	4 - 61
HTX500 ATC Diagnostics Softkey Descriptions, Page 3	4 - 61
HTX 500 I/O Maps	4 - 62
VM, VMX, and VTXU ATC & Machine Diagnostics	4 - 62
ATC & Machine Diagnostics Input Fields	4 - 63
VM, VMX, and VTXU ATC & Machine Diagnostics Softkeys	4 - 64
VM, VMX, and VTXU ATC and Machine Diagnostics Softkey Descriptions, Page 1	4 - 65
VM, VMX, and VTXU ATC and Machine Diagnostics Softkey Descriptions, Page 2	4 - 65
VM, VMX, and VTXU ATC and Machine Diagnostics Softkey Descriptions, Page 3	4 - 65
HTX Automatic Pallet Changer	4 - 66
Squaring the APC Table	4 - 66
Operating the APC	4 - 67
APC Diagnostics	4 - 68
APC Status Conditions	4 - 68
APC Diagnostics Softkeys	4 - 69
Manually Operate the APC from the Load Station	4 - 70
Remote APC Panel Pushbuttons	4 - 70
Manual APC Table Rotation	4 - 72
European Manual Safety Override Mode	4 - 73
Entering the Access Code	4 - 74
Entering a New Access Code	4 - 74
Changing an Existing Access Code	4 - 75
Graphics	4 - 76
Graphics Settings	4 - 76
Toolpath and Solid Graphics	4 - 77
Record of Changes	1