

HERCUS

NOVAT CNC VERTICAL MACHINING CENTRE



The NOVAT VMC is a robust precision machining centre, performing milling, drilling, tapping and thread milling operations. Hercus conversational 'user friendly' programming offers full 3 axis machining in aluminium, brass, plastics, cast iron and steel. On line 'help' menus guide the operator through part preparation, simulation and manufacture.



NOVAT PC300 fitted with 8 position ATC (option) And BT30 tooling (option)

PROUDLY DESIGNED AND MANUFACTURED IN AUSTRALIA

NOVAT Features and Specifications

- Bed type VMC • Cast construction • Hand held pendant control
- Hercus CAD/CAM software • Hercus CNC control
- Hercus operating and training manuals



MACHINE

CNC

	METRIC	IMPERIAL
Table area	510 mm x 165mm	20" x 6.5"
X axis longitudinal travel	300 mm	12"
Y axis cross travel	170 mm	6.75"
Z axis head travel	220 mm	8.75"
Spindle to table	max 295 mm	11.75"
	min 75 mm	3"
Spindle to column	150 mm	6"
Rapid traverse	6 mtr/min	235"/min
Table tee slots number off	3	
	size 11.12 mm	0.437"
	spacing 47.6 mm	1.875"
Spindle taper	no. 30 ISO	
Spindle speeds	infinitely variable 0 - 3500 rpm	
Spindle motor	.375 kw	.5 hp
Axis motors	80watt	.1hp
Axis ball screw- diameter	12mm	.475"
Electrical input	110v/60hz or 240v/50hz	
Resolution	0.01 mm	0.0004"
Machine	length 917mm	36"
Dimension	width 864 mm	34"
	height 917 mm	36"
Weight	industrial model 450 kg	990 lb
	standard model 250 kg	550 lb

NOVAT OPTIONS

Automatic tool changer • Coolant system • Air blast • Machine light.
High speed spindle • Floor cabinet deluxe • Floor cabinet • Robot & interface

NOVAT INDUSTRIAL OPTIONS

• High speed spindle • Robot & interface

ACCESSORIES

• Machine vice • Air vice • BT30 tool holders

HERCUS FINANCE

Finance is available to Hercus customers to assist with their purchase of our products. Ask our sales staff for further details and a plan that will meet your budget. Conditions apply.

HERCUS

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Hercus Controller inc. computer/screen/keyboard/mouse
 Simultaneous 3 axis control
 Min program increment 0.001mm - 0.0001"
 Single step- manual mode- automatic mode
 Tool length compensation /
 geometry and wear offsets
 Unlimited program storage and program length
 ISO international format
 HERCUS CAD/CAM software
 Pendant control
 Input / Output interface
 Tool pathway graphic display
 Automatic homing of axes
 CAM commands
 cut/paste/edit/delete/insert/create
 File Utilities
 store/copy/print/rename/
 view/program directory
 Tool Library
 On line help
 Metric / Imperial switchable
 Absolute / Incremental programming
 Canned cycles / profile cycles
 G./M./S./F./T.. codes

CNC OPTIONS

DXF input
 Training programs
 Printers
 HERCUS software upgrades
 HERCUS service plans

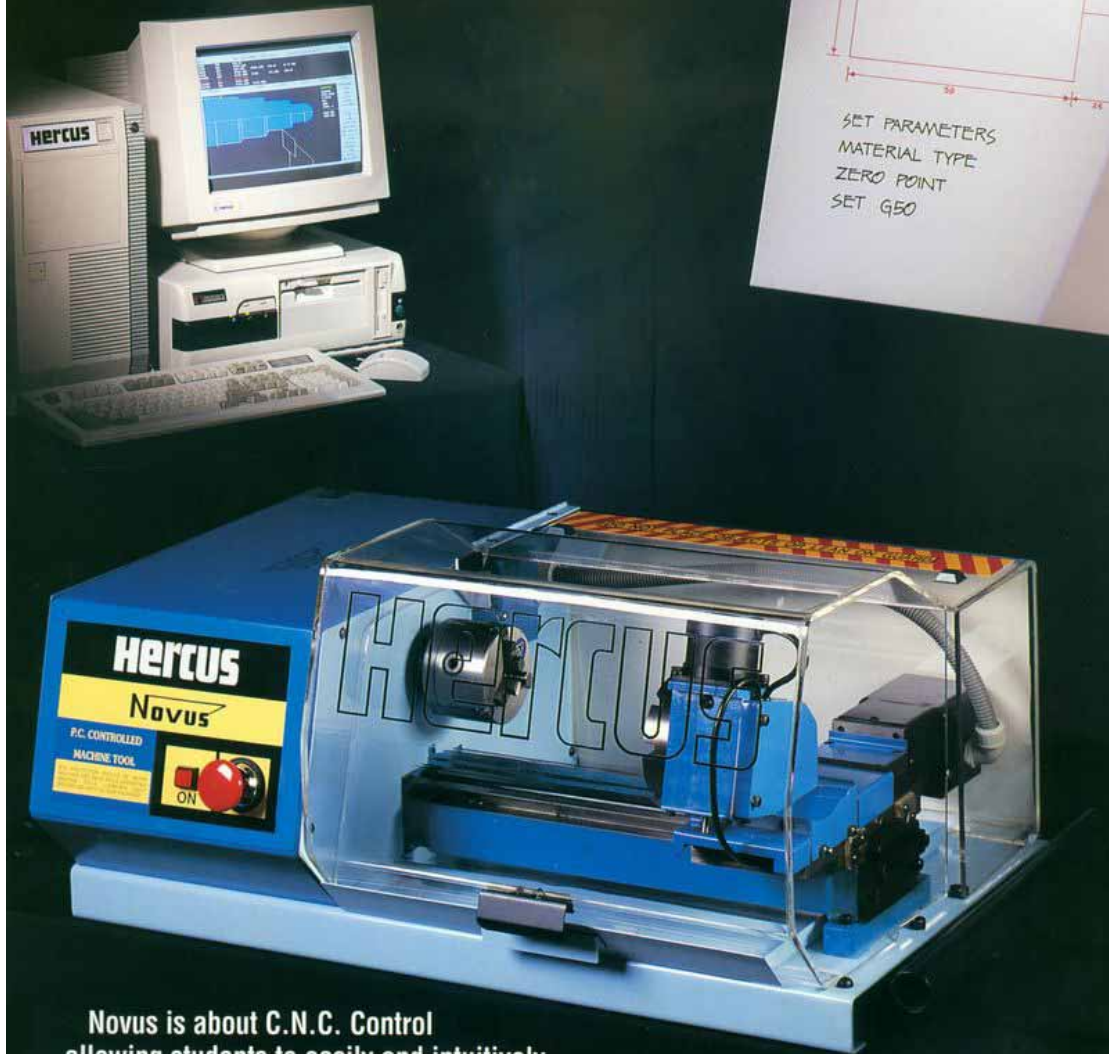
Sold By

Specifications are accurate at the time of printing, but may be modified without notice.

DESIGNED AND MANUFACTURED IN AUSTRALIA

HERCUS

NOVUS PC 160



Novus is about C.N.C. Control allowing students to easily and intuitively control the Lathe using the I.S.O. system of C.N.C. Programming. HERCUS CAD/CAM is user friendly, has on line help menus that guide students through the part preparation, simulation and manufacture.

Its exciting Technology, designed by Hercus Engineers to bring C.N.C. within the reach of all students.

Novus PC 160 Features and Specifications

- 3 Jaw self centring chuck • Four station manual index tool block • 3 Turning tools • Hand held pendant
- Safety guard • Emergency stop button • Computer interface card • Hercus CAD/CAM Software
- Operating and training manuals • Electronic tower and power pack.



MACHINE

CNC

STANDARD

MACHINE

	METRIC	IMPERIAL
Swing over bed	160mm	6.25"
Swing over cross slide	80mm	3.10"
Distance between centres	210mm	8.25"
Travel 'Z' axis	250mm	9.85"
Travel 'X' axis	60mm	2.40"
Spindle bore	16mm	5/8"
Spindle taper	No 2 Morse	
Spindle speed inf. variable	0 - 4500 RPM	
Feed rate	0-1.0m/min	0-140"/min
Rapid rate	4m/min	150"/min
Spindle motor	.38kw	.5hp
Axis motor	80 w	.1hp
Axis screw 'z' diameter	11.1mm x 2mmp	
Axis screw 'y' diameter	9.75mm x 2mmp	
Chuck 3 jaw self centre	80mm	3"
Machine		
length	680mm	26.75"
width	470mm	18.5"
height	332mm	13"
weight	66kg	145lb
Electrical supply	240/110v/1/50 or 60Hz	

CNC

Simultaneous 2 axis control
 Min program increment .001mm - .0001"
 PC base compatible with IBM 386/486 computers
 Single step - Manual mode - Automatic mode
 Tool length compensation / geometry and wear offsets
 Unlimited program storage and program length
 ISO International format
 Computer interface card
 Hercus CAD/CAM software
 Electronic tower and power pack
 Keyboard / mouse / pendant control
 Input / output interface
 Toolpath graphic display
 Automatic homing of axes
 Cut / paste / edit / delete / insert / create
 Store / copy / print / rename / view / program directory
 Tool library
 On line help
 Metric / inch switching - Absolute / incremental
 Canned cycles / profile cycles / stock removal cycles
 Codes G./ F. / S. / T..

OPTIONS

MACHINE

	METRIC	IMPERIAL
Tailstock taper	No 1 Morse	
Tailstock quill travel	25mm	1"
Automatic Turret	8 tools - bi- directional	
Tool section	10mm	.393"

FACTORY FITTED OPTIONS

Tailstock - Automatic 8 station turret - Rapid style toolpost -
 Floor cabinet delux - Floor cabinet - Machine light -
 Live centre - Tooling

CNC

Hercus 486 computer / colour monitor / keyboard / mouse
 Training programs
 Operating and maintenance manual
 Printer
 Special G.. codes
 DXF files.

HERCUS

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DESIGNED AND MANUFACTURED IN AUSTRALIA



Novus PC 160 The Compact Professional

HERCUS AND P.C. TECHNOLOGY.

P.C. Technology brings with it less electronic components, better reliability and a field programmable gate array, allowing all board control functions to be condensed into one chip. It's exciting technology, designed by Hercus engineers to make fault finding easy. The NOVUS is an integral design with the Headstock and Lathe Bed as one rigid piece. Centrally mounted axis screws ensure long slideway life. Axis D.C. Motors are coupled directly to the axis screws providing the best dynamic characteristics.

NOVUS is available in various models - in kit form for those students who want a complete understanding of C.N.C. or delivered "Switch on and go".

C.N.C.

Hercus CAD/CAM display is big, clear, informative and user friendly. Full editing and simulation prior to machining.

Storage capacity and number of programs are only limited by disc capacity and can be supported by the DXF file (option) for importing drawings from other brand name CAD packages.

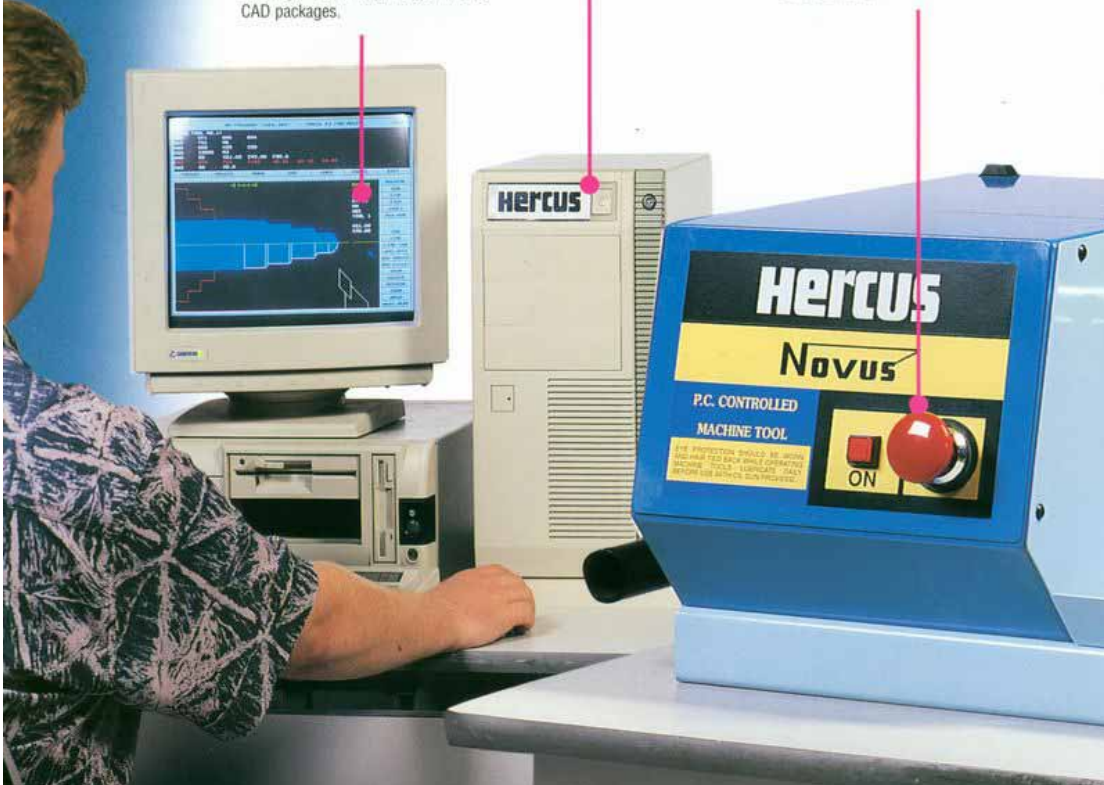
TOWER

The NOVUS CPU and control P.C.B.'s are mounted in the "Tower" quite separate to the machine.


The Tower can be placed in a location convenient to the machine where access is possible and ingress of swarf etc. is eliminated.

SAFETY

All revolving parts are totally enclosed and the work area is covered by a large electrically isolated clear impact resistant guard (option) that allows unrestricted viewing of the machining operations. NOVUS has a power on indicator and a large emergency stop button close at hand.




Novus features




SPINDLE
The spindle is machined from solid steel bar and is mounted on precision bearings. The spindle is driven by a timing belt from the D.C. motor fitted with an encoder.

TAILSTOCK (option)
Spindles (210mm BC) can be turned when the optional tailstock is supplied. The tailstock has a retractable quill and can be locked to the bed.



TOOL POST
An indexing 4 position manually operated Toolpost is fitted as standard. The toolpost accurately locates at each tool position. An eight station Automatic Indexing Tool Turret (option) is shown and a Rapid Style Post is available as an option.



CNC
Step by step

CAD
Design

CAM
Program

SIMULATE
Toolpath

MANUAL
Tools - G50

RUN
Turning

I.S.O.
N10, G90, G71, G95, N20, T01, M05, N30, S2000, M3.

G.CODES
Preparatory Functions

S.CODES
Speed Designation

T. CODES
Tool Number

F. CODES
Feed Rates

M. CODES
Miscellaneous Functions

SAFETY
You can trust

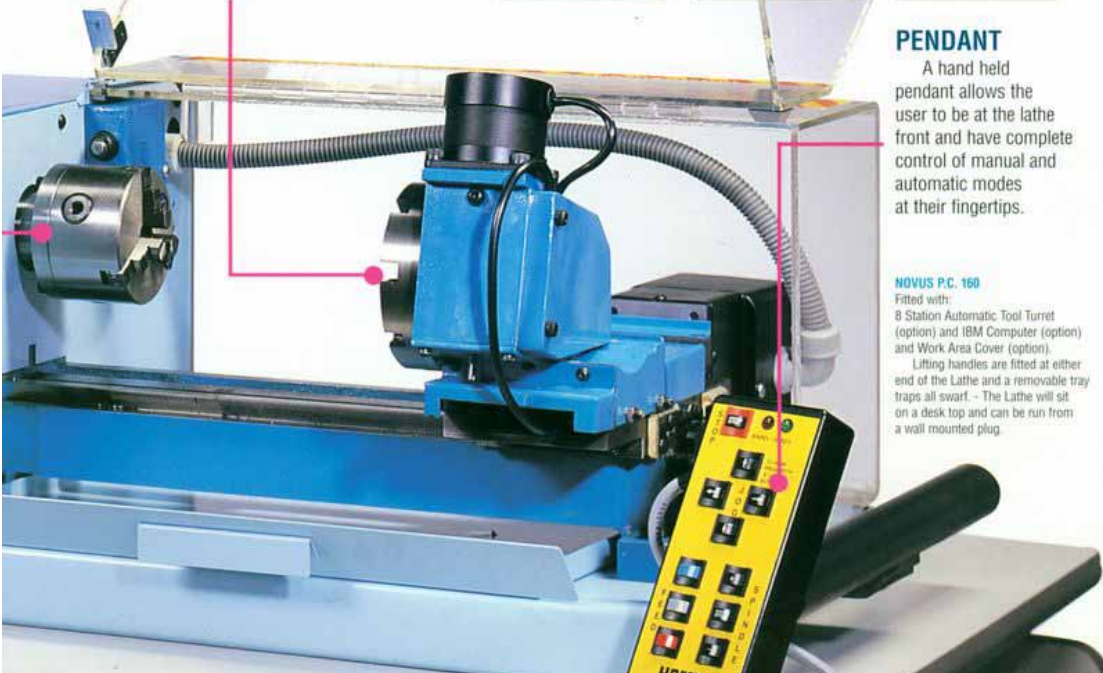
Covered and viewable machining

Spindle Speed Fluctuation Detection

Safety limit and Overtravel Protection

Closed Loop Encoder Feedback

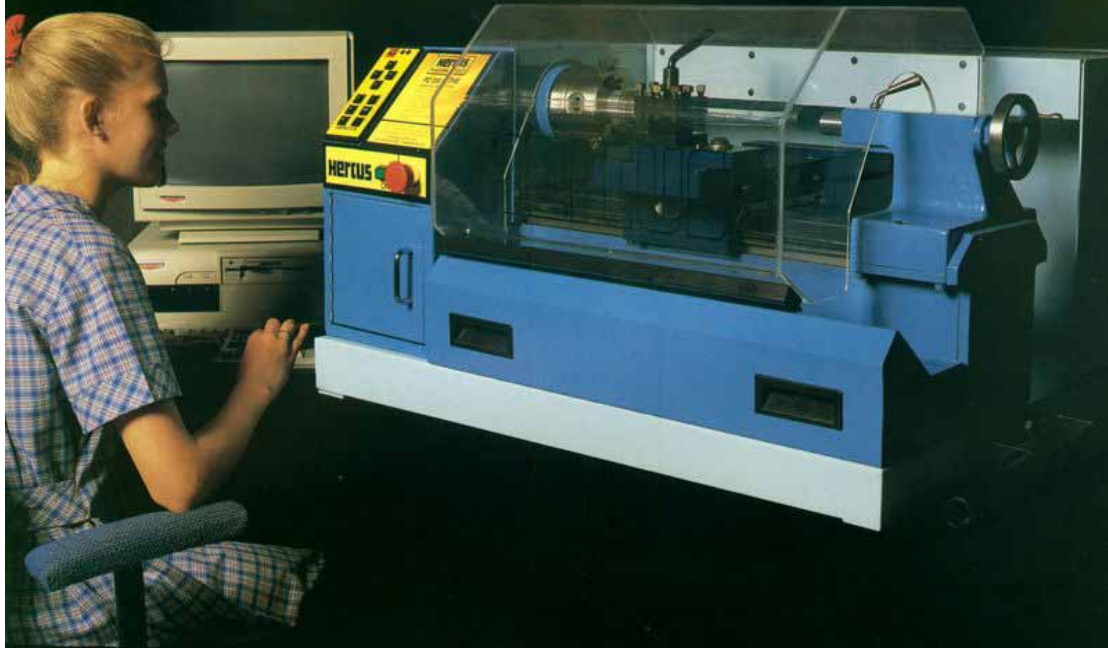
Electrically Interlocked Guards (option)



PENDANT
A hand held pendant allows the user to be at the lathe front and have complete control of manual and automatic modes at their fingertips.

NOVUS P.C. 160
Fitted with:
8 Station Automatic Tool Turret (option) and IBM Computer (option) and Work Area Cover (option).
Lifting handles are fitted at either end of the Lathe and a removable tray traps all swarf. - The Lathe will sit on a desk top and can be run from a wall mounted plug.

HERCUS PC 200 LATHE



TURNING POTENTIAL INTO ABILITY

FEATURES INCLUDE:-

- P.C. operated with Hercus developed CAD-CAM software.
- Built in Simulation Package.
- ISO Language Featuring G & M codes.
- Robust Machine Tool capable of turning stainless steel.
- Unique Pendant Control.
- Removable Swarf Tray.
- Safety Interlocked Guarding.
- State of the Art Hercus built hardware.

Designed and Manufactured in Australia

HERCUS P.C. CONTROLLED MACHINE TOOL

The HERCUS company, like most LECTURERS and INDUSTRIAL INSTITUTIONS believe that there is no point teaching how to program an N.C. or C.N.C. machine other than to the **STANDARD required by industry** today and in the future.

The Hercus P.C. CONTROLLED MACHINE TOOL has menu driven software to perform the following:

- ACCEPT A PROGRAM WRITTEN IN THE I.S.O. LANGUAGE USING "G" AND "M" CODES
- STORE, COPY, PRINT or EDIT THESE PROGRAMS.
- SELECT AND RUN A BUILT IN SIMULATION PACKAGE.
- SELECT AND RUN A BUILT IN CAD/CAM. PACKAGE.
- SELECT A HELP FUNCTION WHICH INCLUDES TOOL DESCRIPTION.
- LIVE VISUAL FEEDBACK TO MONITOR(S) WILL DISPLAY TOOLPATH.

The software will feed back messages regarding machine tool position and feed holds etc. The help function will provide assistance throughout as well as provide some diagnostics.

SPECIFICATIONS & STANDARD EQUIPMENT

SWING OVER BED COVER	200mm
SWING OVER CROSS SLIDE	100mm
DISTANCE BETWEEN CENTRES WITH OPTIONAL TAIL STOCK	330mm
CROSS SLIDE TRAVEL - X axis	100mm
SADDLE TRAVEL - Z axis	300mm
SPINDLE BORE	27mm
SPINDLE TAPER	No.4 morse
SPINDLE FLANGE DIAMETER	100mm
VARIABLE SPEED RANGE	0-2500 r.p.m.
FEED RATE	0-4 metres/min
POWER	240V - 5AMP - 50Hz
VOLUME	105cm x 70cm x 53cm (unpacked)
WEIGHT	140Kg (unpacked)
SAFETY INTERLOCK GUARD	(fully covered)
CLOSED LOOP SYSTEM	
PENDENT CONTROL FACILITY	
INDEXING TOOL POST	(square)
STANDARD 3 JAW CHUCK	100mm
COMPUTER INTERFACE CARD, SOFTWARE & CABLES	
SET OF STANDARD EQUIPMENT INCLUDING CUTTING TOOLS AND TIPS	
OPERATING & TRAINING MANUAL	

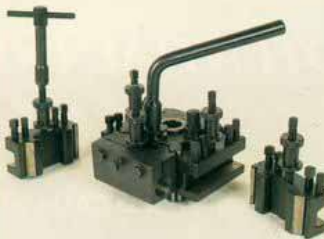


Pendent Control
As Standard

OPTIONAL EQUIPMENT ALSO AVAILABLE



Tail Stock



Rapid Tool Post, including Holders



Auto Tool Turret

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Available from
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 Fax: (852) 2708 3606
 Tel: 2361 9129, 23 19050

HERCUS

VMC 300 VERTICAL MACHINING CENTRE



The VMC300 is a CNC Controlled Vertical Machining Centre that allows operators the ability to easily and intuitively control the machine using the I.S.O. system of CNC programming. HERCUS WINDOWS CAD/CAM software is user-friendly, has on-line help menus that guide the operator through part preparation, simulation and manufacture. Able to perform full 3 Axis machining, in aluminium, brass and plastics the VMC300 is exciting technology designed by HERCUS to bring CNC within the reach of all.

VMC300 fitted with safety guarding (option)

VMC300 The outstanding performance

P.C. technology brings with it less electronic components, better reliability allowing all board control functions to be condensed into one chip. It allows engineers to make fault-finding easy. The VMC300 is a robust precision construction, dovetail slides and wide saddle foot print make this machine Centrally mounted axis screws and D.C. Servo Axis motors ensure that it will out perform its competition for years to come.



C.N.C.

The HERCUS CAD/CAM Software Package has a big, clear, informative and user-friendly display with full editing and simulation prior to machining. Program size and storage capacity are only limited by hard disk size. DXF file (option) for importing drawings from other brand name CAD software is also possible.

IBM and WINDOWS are registered tradenames of their respective companies.



TOWER

The VMC300's CPU and PCB'S are mounted in the 'TOWER' quite separate from the machine tool. The 'TOWER' can be placed in a location convenient to the machine tool where access is possible and ingress of swarf etc. is eliminated.

SAFETY

The work area is covered by a large clear guard that allows unrestricted viewing of the machining operation. The VMC300 has a 'POWER ON' indicator and a large 'EMERGENCY STOP BUTTON' close to hand.

CIM CELL INTEGRATION (OPTION)

The VMC300 is one of the most advanced machine tools of its type today and because of this interfacing with Robotic Arms, Air Vices, 4th Axis Controllers etc. has become a lot simpler. If you are intending to purchase your VMC300 for CIM Cell purposes please advise our sales team so they can ensure the correct interfaces are fitted to your machine before delivery.

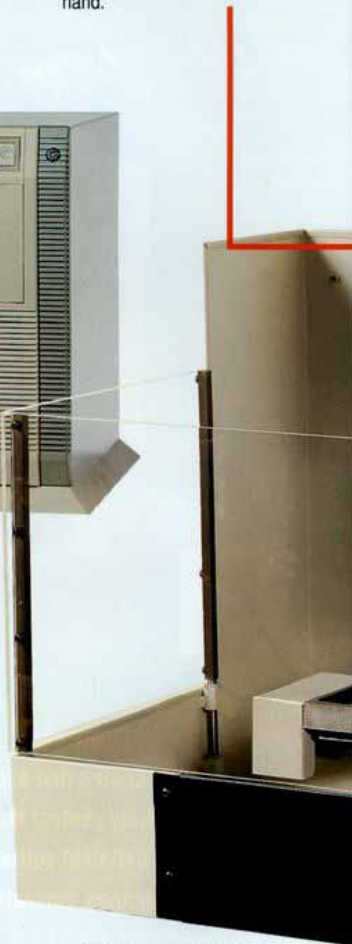
PENDANT

The VMC300 hand held pendant allows the operator to take control of manual operations at the machining area. 'SOFT TOUCH KEYS' operate axis movements, spindle control, calculator and options when fitted such as Air Vice and 4th AXIS.



TOOLING (OPTION)

A comprehensive range of tooling is available for the VMC300 Vertical Machining Centre. R8 Tooling is recommended. Please consult our sales team for pricing and advice.



Quality Certified Company
ISO 9001 LIC No QCC563

mer
 ility and a field programmable gate array,
 an exciting technology developed by HERCUS
 on machining centre, its solid cast iron
 ine the most rigidly constructed in its class.
 e long axis travels on the VMC300

CNC Step by step	I.S.O. N1, G50, S100, T01, F35, M06	SAFETY You can trust
CAD Design	G.CODES Preparatory functions	GUARDED AND VIEWABLE MACHINING
CAM Program	S.CODES Speed designation	SPINDLE SPEED Fluctuation detection
SIMULATE On Computer	T.CODES Tool numbers	OVERTRAVEL Slide safety limit protected
MANUAL CONTROL Set tools - g 50's	F.CODES Feed rates	CLOSED LOOP Encoder feedback
RUN MODE Machining	M.CODES Miscellaneous functions	ELECTRONICALLY INTERLOCKING GUARDS (Option)

VMC 300

HERCUS

VMC300 shown fitted with safety guarding (option), R8 tooling and work vice (option)

VMC 300 Features and Specifications

- Bed type VMC • Cast construction • Hand-held pendant control
- HERCUS CAD/CAM software • HERCUS CNC control
- HERCUS operating and training manuals



MACHINE



CNC

	METRIC		IMPERIAL	
Table area	600 x 150mm		23.6" x 6"	
X axis longitudinal travel	315mm		12.5"	
Y axis cross travel	125mm		5"	
Z axis head travel	185mm		7.25"	
Spindle to table	max	360mm	14.15"	
	min	170mm	6.65"	
Spindle to column	180mm		7"	
Rapid traverse	1.3 mtr/min		50"/min	
Table tee slots number of	3		3	
	size	11mm	0.437"	
	spacing	50mm	2"	
Spindle taper	R8			
Spindle speeds	infinitely variable 0-3500rpm			
Spindle motor	.375kw		.5hp	
Axis motors	80 watt		.1hp	
Axis screw diameter	16mm		0.625"	
Electrical input	110v/60hz or 240v/50hz			
Resolution	0.01mm		0.0004"	
Machine Dimension	length	635mm	25"	
	width	710mm	28"	
Weight	height	890mm	35"	
	standard model	163kg	360lb	

VMC 300 OPTIONS

- Machine light • Floor Cabinet • Robot & Interface

ACCESSORIES

- Machine Vice • Air Vice • R8 Tool Holders

HERCUS FINANCE

Finance is available to HERCUS customers to assist with their purchase of our products. Ask our sales staff for further details and a plan that will meet your budget. Conditions apply

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 Web site: www.axmell.com.au

HERCUS controller includes computer/screen/keyboard/mouse
 Simultaneous 3 axis control

Minimum program increment 0.001mm - 0.0001"

Single step - manual mode - automatic mode

Tool length compensation/geometry and wear offsets

Unlimited program storage and program length

ISO international format

HERCUS Windows CAD/CAM software

Pendant control

Input/Output interface

Tool pathway graphic display

Automatic homing of axes

CAM commands

cut/paste/edit/delete/insert/create

File Utilities

store/copy/print/rename/view/program directory

Tool Library

On-line help

Metric/Imperial switchable

Absolute/Incremental programming

Canned cycles/profile cycles

G./M./S./F./T. codes

CNC OPTIONS

DXF input

Training programs

Printers

HERCUS Software upgrades

HERCUS Service Plans

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