



# UX CNC SERIES

The Wadkin UX CNC Machining Centres comprise a series of advanced designed moving table type machines offering the most versatile solutions to 'just-in-time' production needs for large workpieces up to 2600x1300mm or multiple set-ups.

Incorporating well proven design features and a well provisioned range of options, the UX CNC series caters for almost every conceivable application for machining a wide variety of materials including wood, composites, plastics, phenolics, carbon fibres and non-ferrous metals.

The UX series is competitively priced and represents the most attractive value-for-money investment.

- *High volume production capability, using pendulum machining techniques.*
- *Single- or multi-head configuration for routing, drilling, vertical and horizontal boring, sawing and sanding or automatic toolchangers for even greater flexibility.*
- *Equal flexibility for low volume production and 'just-in-time' mass production.*
- *Advanced control systems, easy to program.*
- *Consistent high accuracy and repeatability.*



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# HIGH PERFORMANCE MACHINING CENTRES

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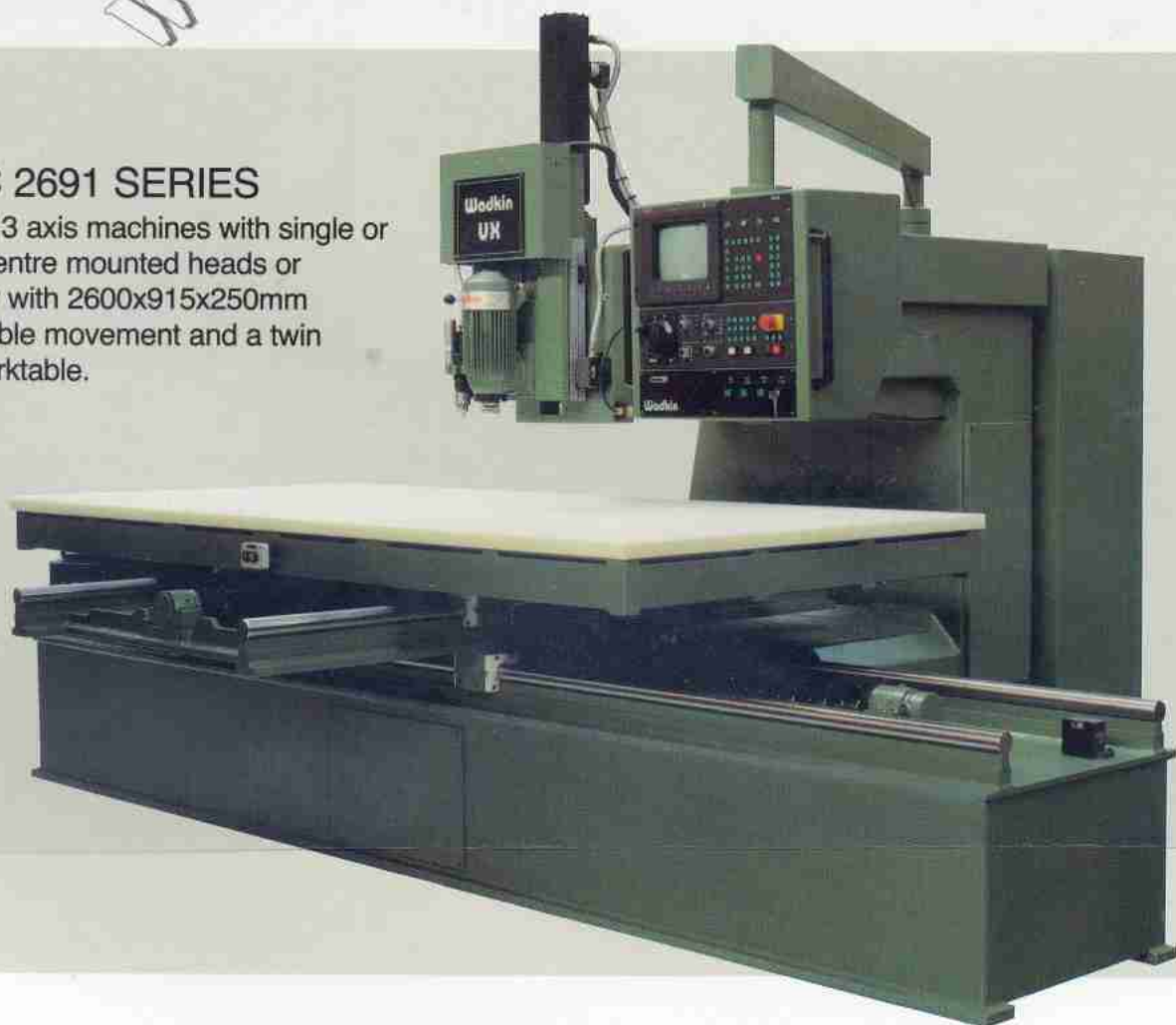


## UX CNC 1691 SERIES

Heavy duty 3 axis machines with 1650x915x250mm programmable movements, single or twin head fixed-centre mounted heads or toolchanger, single or twin vacuum worktable.

## UX CNC 2691 SERIES

Large table 3 axis machines with single or twin fixed centre mounted heads or toolchanger with 2600x915x250mm programmable movement and a twin vacuum worktable.





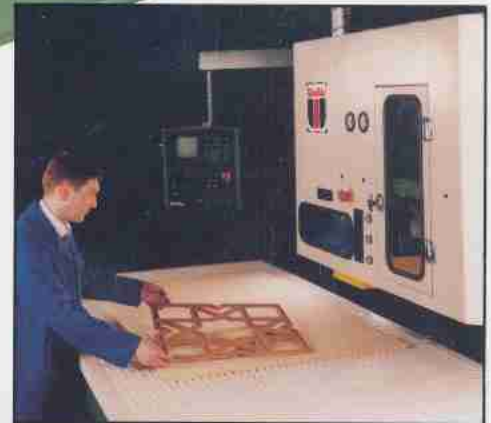
# UX CNC SERIES

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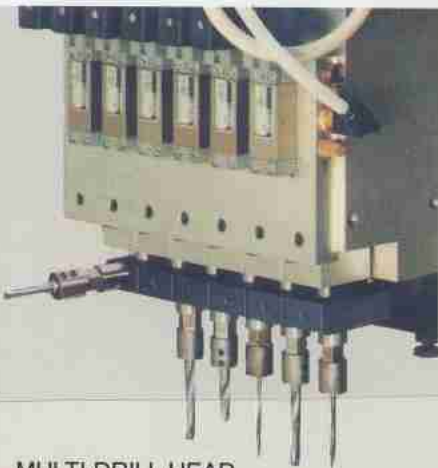


## UX CNC 2612 SERIES

Large table machine, programmable movements of 2600x1250x250mm, with multiple head choice including toolchanger with twin or quad vacuum worktable.

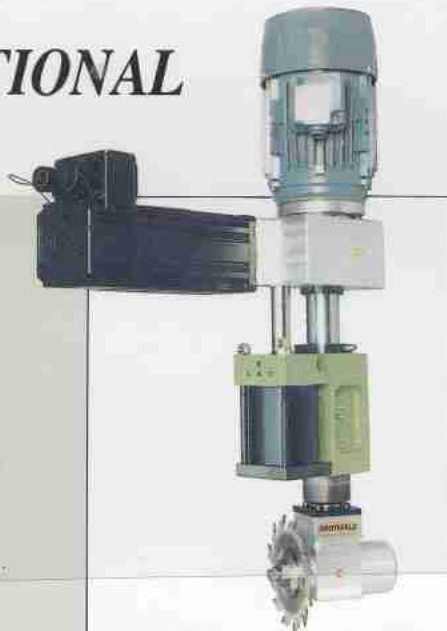


## SUPERIOR OPTIONAL FEATURES



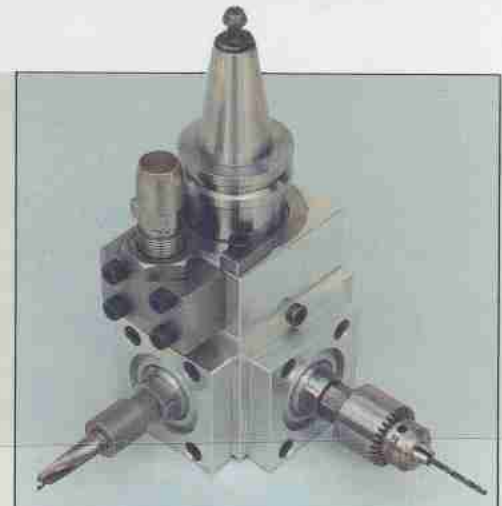
### MULTI-DRILL HEAD

A 6-spindle independently programmable drill unit for point to point boring, featuring 5 vertical spindles at 32mm centres and one twin opposing right angle spindle.



### SERVO-INDEXING UNIT

Special programmable 360° indexing unit that can be either a universal head, grooving saw head or horizontal router head.



### UNIVERSAL HORIZONTAL HEAD

An efficient head with 4 horizontal spindles at right angles, running at 4500rpm.

# ERIOR MACHINING

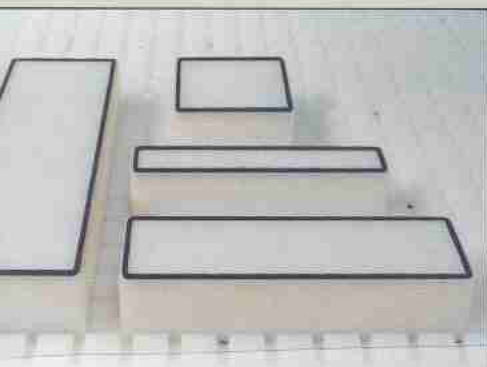
## THE MOST COMPLEX APPLICATIONS



**AUTO-LUBRICATION SYSTEM**  
Comprehensive lubrication to all slideways and ballscrews.

### UX CNC 2613 SERIES

Programmable movements of 2600x1300x250mm, incorporating covered axis ways, automatic lubrication system, multiple-head choice, including toolchanger, with twin or quad vacuum worktable.



**VACUUM CUPS**  
Vacuum cups in a range of sizes are available as an alternative to using fixtures.



**CHAIN TYPE TOOLCHANGER**  
Additional capacity is easily catered for by insertion of extra toolholder links.



**ROTARY TYPE TOOLCHANGER**  
Conventional rotary type toolchanger with a maximum capacity of 10 tools.

# ADVANCED CONTROL SYSTEMS

## BOSCH CC 120M CONTROL

Reliable 3 or 4 axis control system with 4 main modes of operation. Velocity feed forward allows high accuracy, high speed contouring. Facilities for background editing, zero shifts and fixture offsets.



- **MEMORY MODE.** Auto operation from extensive 32K storage. (Optional 64K or 128K available.)
- **MACHINE MODE.** Allows full manual control by hand/wheel or jog buttons, or programming by 'teach-in' facility.
- **AUTO MODE.** Used to dry run a program, start and break points, and a drip feed facility for mega programs.
- **INFO MODE.** Allows monitoring of programs with clear text dialogue, including error messages, self-generated graphics and cycles, and display status details (diagnostics).

## BOSCH CC 220M CONTROL

Full function multi-axis control system. Features 6 main modes of operation, 12" grey scale VDU or optional 14" colour VDU, simulated graphics, CPL programming language, nesting and programmable corner acceleration and deceleration.



- **AUTO MODE.** Auto operation from extensive 64K part program storage. Optional memory up to 512K. Built-in 32K eeprom for all user files.
- **MACHINE MODE.** Permits full movement of axes, speed selector and jog buttons.
- **PROGRAM MEMORY MODE.** Comprehensive mode activated for manipulation of memory when loading, deleting, editing and down loading programs.
- **DIAGNOSTICS MODE.** Full access to control and machine diagnostics information, including input/output status.
- **CORRECTION MODE.** Used for introducing tool and fixture offsets from accessed reference tables.

## NUM 720B CONTROL

16/32-bit microprocessor based numerical control with associated programmable logic controller (PLC). 9" monochrome or optional 10" colour VDU with 6 modes of operation.



- **AUTO MODE.** Used for auto operation from 64K storage.
- **SINGLE BLOCK MODE.** Permits actuation of program in single steps to check for program errors.
- **MANUAL DATA INPUT MODE.** Allows operation of machine by use of manual data input keys on control panel. A facility normally used for setting-up.
- **EDIT MODE.** Allows operator to edit programs.
- **DRY RUN MODE.** Allows full dry run testing with inhibited axes.
- **DATA INPUT MODE.** Used with external programming systems.

## NUM 750B CONTROL

High level performance multi-axis control with 6 main modes of operation and 9" VDU. Velocity feed forward feature for accurate high speed machining and cycles for moulds and forms using NUMAFORM OPTION. Input/output status for diagnostics assistance.



- **AUTO MODE.** Used for auto operation from extensive 142K part program storage (optional 256K memory).
- **SINGLE BLOCK MODE.** Permits actuation of program in single steps to check for program errors.
- **MANUAL DATA INPUT MODE.** Allows operation of machine by use of manual data input keys on control panel. A facility normally used for setting-up.
- **EDIT MODE.** Allows operator straightforward facility for editing and monitoring of programs.
- **DRY RUN MODE.** Allows full dry run testing with inhibited axes.
- **DATA INPUT MODE.** Used with external programming systems to input/output programs to/from the controller.

# UX CNC SERIES SPECIFICATIONS

Model	1691	1612	2691	2612	2613
Table Size	1730x975	1730x1325	2760x975	2760x1325	2760x1340
Programmable Movements X	1650	1650	2600	2600	2600
Y	915	1250	915	1250	1300
Z	250	250	250	250	250
Optional 350mm Z axis	No	Yes	No	Yes	Yes
Feedspeeds X & Y	0–12m/min	0–12m/min	0–12m/min	0–12m/min	0–20m/min
Feedspeeds Z	0–6m/min	0–6m/min	0–6m/min	0–6m/min	0–6m/min
Optional Feedspeeds Z	No	0–10m/min	No	0–10m/min	0–10m/min
Spindle Nose to Table (min)	25	25	25	25	25
(max)	275	275	275	275	275
Optional (max)	No	375	No	375	375
CNC System – Standard	BOSCH cc 120m	BOSCH cc 120m	BOSCH cc 120m	BOSCH cc 120m	BOSCH cc 120m
CNC System – Optional	BOSCH cc 220m	BOSCH cc 220m	BOSCH cc 220m	BOSCH cc 220m	BOSCH cc 220m
	NUM 720B/750B	NUM 720B/750B	NUM 720B/750B	NUM 720B/750B	NUM 720B/750B
Vacuum Pumps (2) Motor Power	0.75 kW	3 kW	3 kW	3 kW	3 kW
Pressure Max	150 mbar	100 mbar	100 mbar	100 mbar	100 mbar
Volume	27 m <sup>3</sup> hr	80 m <sup>3</sup> hr	80 m <sup>3</sup> hr	80 m <sup>3</sup> hr	80 m <sup>3</sup> hr
Optional larger volume	80 m <sup>3</sup> hr	128 m <sup>3</sup> hr	128 m <sup>3</sup> hr	128 m <sup>3</sup> hr	128 m <sup>3</sup> hr
Toolchanger Capacity (No of tools)	10	10	10	10	10
Taper	30 ISO	30 ISO	30 ISO	30 ISO	30 ISO
Holder V Flange DIN 69871	Chucks with collets to adapt to straight shanks				
Collet Diameter (max)	25	25	25	25	25

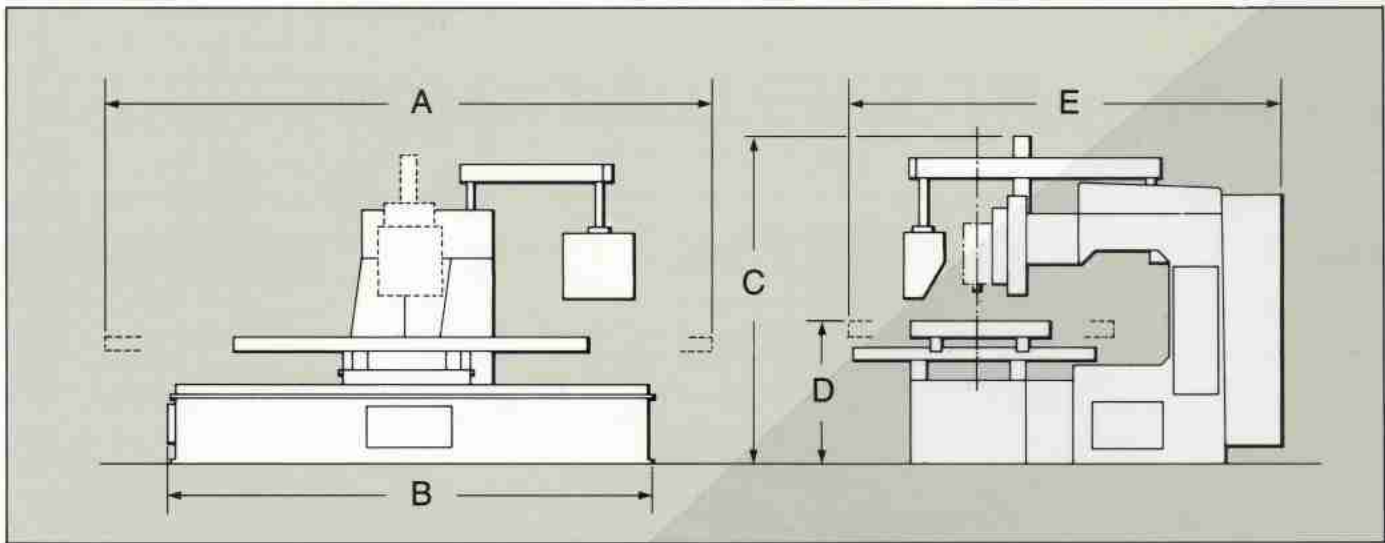
All dimensions are in millimetres

## ROUTER HEAD TYPES

Head Type	Power Rating (Full Speed)	Spindle Speed	Tool Holding	For use on Models	Toolchanging Capability
F	3 kW (4 hp)	6000–24000 rpm	Wadkin Standard Option No. 2 MT	All	No
CL Standard	9 kW (12 hp)	1500–18000 rpm	30 ISO DIN	All	Yes
Optional	12 kW (16 hp)	1500–18000 rpm	30 ISO DIN	All	Yes

Note: Power Ratings quoted all constant

Optional adjustable head carriage is available in 2 sizes on Models: 1612, 2612, 2613  
 1150mm for mounting up to 4 heads  
 1650mm for mounting up to 6 heads



**TABLE OF MACHINE DIMENSIONS**

DIMENSION	A	B	C	D	E	APPROX. MACHINE WEIGHTS
MODEL						
<b>1691</b>	3380	2630	2370	925	2850	2600kg
<b>1612</b>	3380	2630	2620	970	4350	3900kg
<b>2691</b>	5280	3995	2370	950	2850	3000kg
<b>2612</b>	5280	3995	2620	970	4350	5570kg
<b>2613</b>	5280	3995	2620	970	4450	5600kg

## **PROFESSIONAL TRAINING AND AFTER SALES BACK-UP**

Wadkin professionalism extends well beyond the selling date, since full training of operators by highly experienced training personnel, both at Wadkin Colne and on-site, is part of the thorough introduction to advanced machining. Training fully extends to

programming procedures augmented by on-the-job familiarisation and continuing after-sales care. Frequent on-site follow up visits are conducted as a matter of routine to ensure that everyone achieves the maximum benefit from investment in Wadkin CNC machining centres.

