

# HH Roberts

## TWH Series Heavy Machining Centers

powered by **ANILAM**

OR



**HEIDENHAIN**



TWH-4025



TWH-5026



TWH-6031

TWH-6031



TWH-6031



Above is the frame of the TWH-1045 and below with the enclosure fitted.



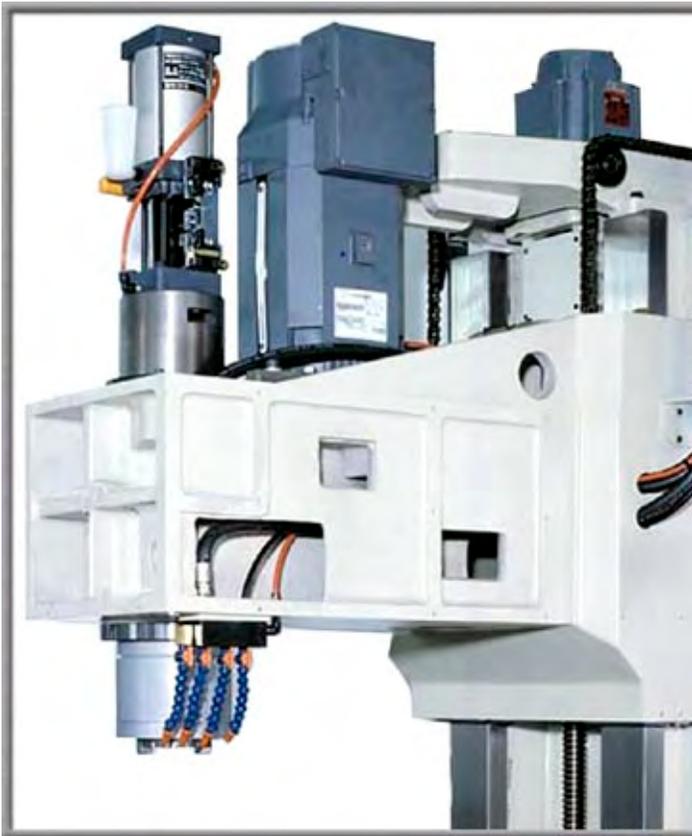
TWH-5026



TWH-4025

### Options

- Anilam 6400 control for 4 axis capability
- Heidenhain, Fagor or Fanuc controls
- off-line software with DXF file processing
- 1 micron linear feedback systems
- open machine with removeable table guards for oversize parts
- spray mist systems
- optional stop, and block delete
- additional M functions for controlling external devices like fixtures, vacuums, etc.
- low coolant level alarm
- flashing beacons on alarm or tool change
- indexers and 4th / 5th axes
- 6" riser block for increased vertical capacity



TWH-5026 frame

TWH-4025 frame

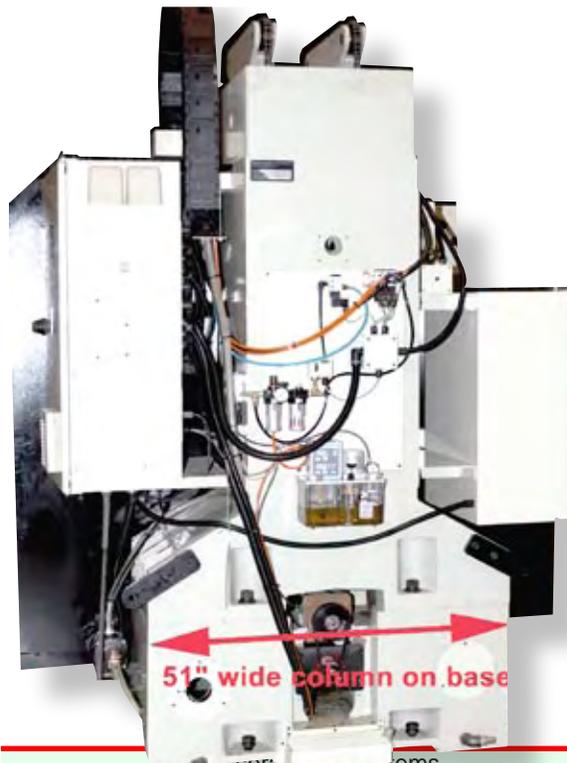


## TWH Series: box way machining centers



TWH-6031

TWH-6031



51" wide column on base

### Options

- Anilam 5000 series controls with additional axes
- Heidenhain, Fagor or Fanuc controls
- additional ram up to 64 MB
- heavy duty 6 bearing spindle cartridge
- 10,000 - 12,000 or 15,000 rpm spindles
- geared heads with ZF gearboxes
- flat panel LCD display on models where it is not standard
- offline software with DXF file processing
- 1 micron linear feedback systems
- up to 30 Hp output spindle drives
- spray mist systems
- optional stop. and block delete
- additional M functions for controlling external devices like fixtures, vacuums, etc.
- low coolant level alarm
- flashing beacons on alarm or tool change
- storage cabinet on left side of column
- isolating transformers for wild leg power and / or 460 volt supplies
- indexers and 4th / 5th axes
- 6" riser for increased vertical capacity

## TWH Series: box way machining centers

	TWH-4025	TWH-5026	TWH-6031-MCV
travel X	40"	50"	61"
travel Y	25"	26"	31"
travel Z	24"	24"	27.5"
table surface	23.6" x 47.25"	23.6" x 59"	26" x 67"
number of T-slots			
table height above floor	33.8"		36"
spindle C/L to face of column	26 1/2"	26 1/2"	32"
spindle nose to table	22"	28"	33.5"
spindle nose to table optional	28"	34"	39.5"
saddle width	68"	86.6"	86.6"
tooling	Cat-V or optionally BT		
main spindle bearing ID	# 40 spindle 70mm (2 3/4"), # 50 spindle 85mm ( 3.34")		
number of bearings on spindle	7 total		
tool changers: standard optional	carousel type 20 tools arm type 24 or 32 tools		
spindle drive output # 40 taper	10 / 15 Hp		
spindle drive output # 50 taper	15 / 20 Hp		
spindle speeds, standard * optional optional with ZF gearbox	80 - 6,000 60 - 4,500 20 - 10,000		
ballscrew diameter X, Y and Z	50mm (~2" )		
rapid traverse rate	1000 IPM		
cutting feed rate	to 350 IPM*		
main power supply optional	208, 230, 460 or 600 Volt balanced 3 phase multiple voltage taps		
full load amps, standard			
approximate weight	12,760 lbs	14,300 lbs	26,400 lbs
floor space L-R x F-B	113" x 97"	131" x 105"	158" x 108"
max height in operation	100"	106"	116"

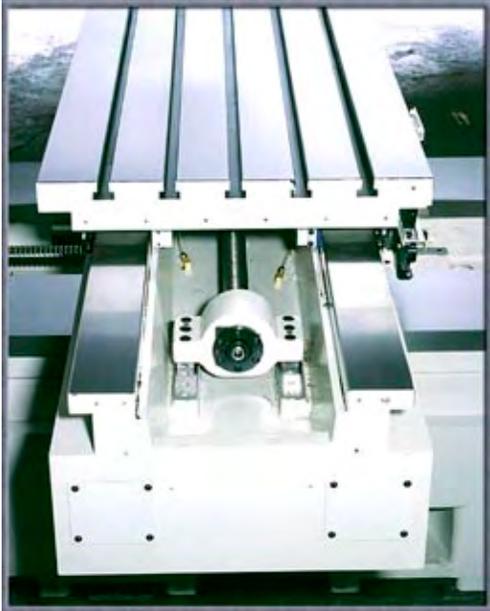
\* cutting feed rate is for 3 axis simultaneous contouring. This rate will vary with program preparation. ( your mileage may vary. )

### Standard Equipment and Features

- **Anilam 6300 CNC**, 3 axis system with
  - 4 GB hard disk
  - floppy disk drive
  - 32 MB RAM expandable to 64 MB
  - Ethernet port, RS-232 port and parallel port
  - flat panel, LCD display
- 20 tool carousel style automatic tool changer
- multifunction handheld MPG with axis select, feed rate select, coolant on/off, feed hold and E-stop
- program controlled spindle speeds
- program controlled coolant system
- spindle orient
- rigid tapping
- full enclosure with pull out chip pan / coolant tank
- high intensity worklight
- automatic central lube system with low oil alarm
- telescopic steel slideway protector on all 3 axes
- box slideways on all three axes
- hardened and ground slideways on X, Y , and Z with Turcite counterslides
- high precision ballscrew thrust bearings on all ballscrews
- pretensioned ballscrews on all axes
- class 4 precision ballscrews.
- your choice of Cat-V 40 or Cat-V 50 tooling
- inspected with Heidenhain equipment and ballscrew compensations installed
- workpiece chip air blast, program controlled

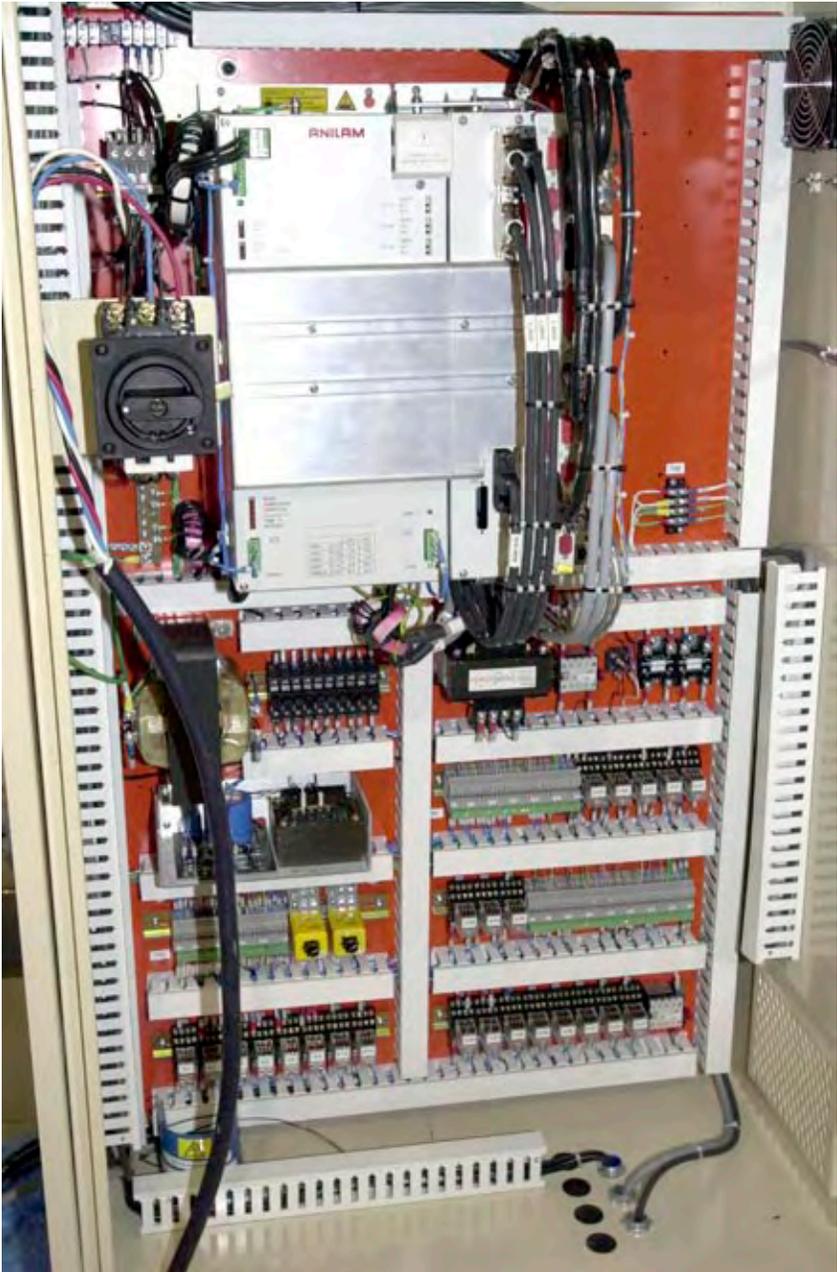
The wide slideways assure great stability and the large surface area minimized wear.

The pre-tensioned ballscrew thrust bearing bracket is clearly show



The Anilam 6300 is new hardware without a new face. It is the integration of Heidenhain's CNC processor, spindle and axis motors, and the user interface that has made Anilam CNC systems appreciated by users.

The system retains the same ease of programming and system flexibility that has been delivered for years, and marries it to superb German hardware engineering, giving feed rates for contouring of 300 IPM and more, and great system reliability.





The Heidenhain VLM scale during inspection for positioning and repeatability.

### **The Inspection Process**

We have invested in a Heidenhain linear scale and double ball-bar system. The accuracy of these far exceeds what is required for machine tool calibration. The linear scale captures positioning data to 6 decimal places of a millimeter. That's one thousandth of a micron, or 0.000,000,039". We make the inspection from the table top to the spindle. This is significant because it also captures some mechanical factors that effect positioning accuracy, like saddle rock, unlike many laser systems that measure from the shop floor to the table.

The data is captured on multiple passes in each direction and inserted into correction tables in the Anilam CNC. The result is typical positioning accuracy of .0004" and repeatability better than .0002". The final inspection after putting in the corrections gives printed reports that are according to DIN ISO 230-2.

This process is standard on all models except the TW-32-QE and TW-32-TRHE, where it is an option.



Our current location, 5 minutes from the Toronto International Airport



Our founder Harold Hobday Roberts, in front of our first shop, circa 1937.

### **Our Background**

HH Roberts Machinery was founded in Toronto in the early 1930's and now has the 3rd and 4th generations of the family active. We have grown from a used machinery dealer / repair and rebuild shop to one of the major machine tool distributors in Canada. We have a modern 20,000 square foot facility just minutes from the Toronto International Airport.

We have been offering mills prepared by Topwell Machines, Taiwan for 20 years, and we have been fitting them with Anilam CNCs for more than 10 years.

There are over 30 models to choose from, including knee

mills, bed mills, open and enclosed machining centers, our unique HV combination horizontal / vertical machining center and bridge type graphite mills not detailed in this catalog. We keep nearly 100 machine frames in stock, ready to be assembled on your order. We have a complete stock of spare parts available at very reasonable costs for overnight shipping.

The dealers we sell through in the USA have demonstrated a commitment to the Anilam system and should be capable of supporting your staff and the machine in start-up, training and after sales service.



Vertical machining centers, open and enclosed 31" x 20" to 60" x 32"

**New !**



18" and 24" high speed machining centers with 1440 IPM rapid



Bed mills with gearless quill heads to 7 1/2 Hp and handwheels.



Vertical bed mills with machining center heads to 31" x 20" to 60" x 32"



**New !**

**Unique horizontal / vertical machining center**



2 and 3 axis knee mills with tilting heads or rigid heads up to 7 1/2 Hp and 40" x 20"



CNC lathes from 15" x 30" to 20" x 80"



Precision gang tooling lathes



Precision dovetail bed lathes

*Our products are continuously developing and specifications change frequently. It is suggested that you reconfirm any critical specifications at the time of order.*

Made in Canada by:

**HH Roberts Machinery Mfg.**

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