

# Farrell Engineering Ltd

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Video :-

please click here for video



Category	:-	Gear Hobbers CNC	Serial No	:-	
Model	:-	GD 30 CNC	Country	:-	
Make	:-	Mitsubishi	Type of Machine	:-	CNC Gear Hobbing Machine
Year	:-	1998	Weight	:-	0.0
Dimensions	:-		Power	:-	
Location	:-		Asking Price	:-	On Request

Specification :-

## **USED MITSUBISHI GD30 CNC GEAR HOBGING MACHINE DATE OF MANUFACTURE DEC. 1998**

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**One (1) - Model GD30CNC MITSUBISHI 'CNC' Gear Hobbing Machine, suitable for the cutting of spur and helical gears, pinions, splines, work-gears, and other work-pieces of similar profile up to 11.8' (300mm) diameter, 16' (400mm) face, and 3 DP (module 8) capability**

### **EQUIPMENT / FEATURES:**

- ' Coolant supply system
- ' Automatic hob head swivel/clamping device
- ' Hob arbor power clamping device
- ' Full enclosure for work area w/door interlock device
- ' Direct drive hob spindle, and hydraulic work-table rotation backlash eliminator
- ' One (1) hob arbor (1.25' diameter)
- ' Coolant guard door (Manual sliding type)
- ' Double palm control
- ' Work counter/Tool counter (Shown on CRT screen)
- ' Work area light

- ' Hydraulic and lubrication oil system with automatic temperature control
- ' Magnetic chip conveyor (including chip box ~20' tall)
- ' Hydraulic part clamping device
- ' Circuit breaker with ground fault circuit interrupter
- ' Light in the control box
- ' Double palm start buttons
- ' Hob arbor set-up device
- ' Hob spindle load indicator
- ' Complete electrical equipment for 3-phase, 60 Hertz, 230 volts
- ' Full machine documentation, operator's manual for machine & controller, parts list, wiring & hydraulic diagrams

**CNC control system (FANUC 18MB) with gear hobbing software with conversational dialogue and CRT, with electronic hand-wheel for all CNC controlled motions**

**The following five (5) axes are numerically controlled via servo-motors:**

- X-Axis (radial feed)**
- Z-Axis (axial feed)**
- C-Axis (table rotation)**
- Y-Axis (hob shift)**
- A axis (for hob head swivel)**
- B-Axis (is for hob spindle rotation)**

**Multiple Machining patterns to include:**

- ' **Crowning**
- ' **Tapering**
- ' **Double Cut**
- ' **1-3 Step Cluster Hobbing**
- ' **Gash Milling**

**Minimum input increment**

- ' **0.00004'** for 'X', 'Z', and 'Y' axis
- ' **0.001°** for 'C' axis
- ' **0.001°** for 'A' axis
- ' **Infinitely variable radial feed**
- ' **Infinitely variable axial feed**
- ' **Infinitely variable hob speed**
- ' **Automatic incremental hob shift**
- ' **Automatic hydraulic clamping of hob head assembly**
- ' **Automatic powered hob head swivelling**
- ' **Self-diagnosis function**

- ' Ladder logic diagnostics (Shows on CRT)
- ' 110 V (AC), 1 ampere outlet
- ' Alpha-numeric manual data input keyboard with 9' CRT
- ' Hob speed indicator (shows on CRT)
- ' Work and tool life counter (shows on CRT)
- ' Cycle-end indicating lamp
- ' Fully enclosed coolant guarding
- ' Automatic calculation of cutting conditions
- ' RS232C I/O interface
- ' All Servo Motors are brushless, maintenance-free AC type drives

#### Maximum programmable dimensions:

- ' +/- 9999.9999' for 'X', 'Z', and 'Y' axes
- ' +/- 359.9999 for 'C' axis in non-synchronization (G201, G228')
- ' Unlimited for 'C' axis in synchronization (G210, G220)
- ' +/- 450.000 for 'A' axis (+/- 45°)

#### Synchronized control axis:

- ' 'C' axis is synchronized to 'B' and 'Z' axis

#### Simultaneous control axis:

- ' 'X', 'Z', and 'C' axes are controlled simultaneously
- ' Cutting feed override and cancel 'X' and 'Z' axes.
- ' Rapid traverse override. 10%, 25%, 50% and 100%
- ' Dwell - G04 Code
- ' Hob cutter diameter compensation (total 99)
- ' Automatic return to the original reference point
- ' G28, ('X' and 'Z' axes) G228 ('C' axis)
- ' Backlash compensation ('X' and 'Z' axes)
- ' Single block (Enables to set by menu switch)
- ' Machine lock (Enables to set by menu switch)
- ' Auxiliary function lock (Enables to set by menu switch)
- ' Door interlock
- ' Feed hold, retract
- ' Machine operation by MDI Mode
- ' Machine operation by memory
- ' Menu Switch (Enables to operated the switch ON/OFF on CRT)
- ' Self-diagnosis function
- ' displays the malfunctions of both NC and machine
- ' Custom macro sub-program control - Basic hobbing patterns are stored
- ' Automatic setting of hobbing conditions function
- ' Hob cutter diameter compensation
- ' 3 kinds of compensation (total 60 sets) are provided, including'
- ' 'Overall diameter,' 'Base tangent length,' and 'Radial dimension.'
- ' RS232C I/O interface
- ' Program memory storage for approximately 90 different parts (80 m)

#### Additional equipment

- ' Automatic coolant guard door
- ' 100 mm axial stroke travel extension (total 400 mm)

- ' Oil mist collector (filter type)
- ' Preparation for oil mist collector
- ' Idle station for rough meshing
- ' Accurate meshing inside the machine work area
- ' Special software for auto meshing
- ' Rinsing hose with pistol grip for manual cleaning of fixture & work table
- ' Preparation for customer vibration sensors
- ' Automatic power shut-off
- ' Counter measure for water suitable coolant

#### **PRINCIPAL SPECIFICATIONS:**

**Maximum workpiece diameter 11.80' (300mm)**

**Maximum diametrical pitch/module 3.175 DP (8M)**

**Maximum swiveling angle +45°**

**Minimum number of teeth 5**

**Maximum number of teeth 1000**

**Center distance from hob spindle to work spindle**

**Maximum 11.8' (300mm)**

**Minimum 1.57' (40mm)**

**Maximum radial travel 10.6' (270mm)**

**Max. height work table to center of hob spindle 23.6' (600mm)**

**Min. height work table center to hob spindle center 7.9' (200mm)**

**Maximum axial travel 15.7' (400mm)**

**Programming unit English (inch)**

**Distance between worktable and tailstock**

**Maximum 29.1' (740mm)**

**Minimum 13.4' (340mm)**

**Worktable diameter 11.8' (300mm)**

**Maximum worktable speed 60 rp**

**Maximum hob size:**

**Diameter 5.9' (150mm)**

**Length 9.1' (230mm)**

**Maximum hob shift 7.1' (180mm)**

**Hob speed range 75-750 rpm**

**Feed rate:**

**Axial - inch/min. (mm/min.) 0.04-39.4' (1-1,000mm)**

**Radial - inch/min. (mm/min.) 0.04-39.4' (1-1,000mm)**

**Rapid traverse**

**Axial - inch/min. (mm/min.) 393.7' (10,000mm)**

**Radial - inch/min. (mm/min.) 393.7' (10,000mm)**

**Motors:**

**Main drive AC (spindle) 20.0 hp (15 kW)**

**Radial feed (X) AC servo 2.4 hp (1.8 kW)**

**Axial feed (Z) AC servo 3.8 hp (2.8 kW)**

**Table drive (C) AC servo 6.0 hp (4.5 kW)**

**Total Power Consumption 45 KVA**

**Height, floor to worktable 40' (1,025 mm)**  
**Machine overall length 118.9' (3020mm)**  
**Machine overall width 129.5' (3290mm)**  
**Machine total height 112' (2,626mm)**  
**Floor space 118.9'x119' (3,020x3,025mm)**  
**Net weight 22,000 lbs. (10,000 kg)**

Description :--