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Machine Id	:- 1118	Serial No	:-
Category	:- Gear Hobbers CNC	Model	:- GD 30 CNC
Country	:-	Make	:- Mitsubishi
Type of Machine	:- CNC Gear Hobbing Machine	Year	:- 1998
Weight	:- 0.0	Dimensions	:-
Power	:-	Location	:-

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 +45o
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)