



**DEGEM
SYSTEMS**

Tech-Prep

Solar energy training system

Wind energy training system

Solar water heating energy
training system

Polar robot & robotics principles
training system

Conveyors & sorting machines
training system

Cartesian robot & computerized
storage training system

CNC lathe machine training
system

CNC milling machine training
system

Process control training system

Basic electronics training system

Basic communications systems

Basic pneumatics training system

Basic hydraulics training system

Basic mechanics training system

Pressure forming & inflation
training system

Bending & vacuum forming
training system

TP-3715

CNC Milling Machine Training System

Objectives

The TP-3715 course introduces the student to the computerized numerical control milling machine, which provides technical orientation, which may help him choose his future career. This course covers the description of the system and its components, hardware and operation and simulation software as well as experiment exercises to develop step-by-step G-code programs. The understanding of the operation of the system and its programming requires a sound theoretical foundation that can be readily applied to developing and debugging G-code programs. The TPS-3715 course can provide the essential basic knowledge with fundamental concepts and related subjects. Student comprehension is enhanced by performing practical experiments with the training system.

Description

The learning unit is a compact, desk-top unit designed to introduce the student to the world of the CNC milling machine. The training system exposes the student to the historical development of CNC, to standard G-code and to the use of the computer to control the machine. Through practical, hands-on activities, the unit enables the student to produce milled products with a reasonable degree of accuracy.



Specifications

LEARNING PROGRAM

- System description
- G code and M code
- Operating the DMILL software
- Operating the entire system
- Monitor description
- Slot processing
- Arches
- Profile processing
- Pocket processing
- Drill processing
- Project processing

TECHNICAL CHARACTERISTICS

- X axis (110mm)
- Y axis (110mm)
- Z axis (45mm)
- Spindle speed (500-3000rpm)
- Table surface (150 x 230mm)
- Spindle motor (DC)
- X, Y and Z axis motors (Servo type; 12 VDC)
- Spindle bore (10mm, Morse taper no. 1)
- Emergency stop button
- Low voltage lighting
- Vacuum cleaner unit
- RS-232 or USB communication to PC
- Operating voltage (110-240 VAC external switching supply)
- General dimensions (650 x 590 x 590mm)

SUPPLIED ACCESSORIES

The learning unit is supplied with the following accessories:

- 5 plastic blocks, 90 x 80 x 20mm
- Milling tool, 3mm
- Milling tool, 6mm
- Key-type drill chuck MT 1-3/8-24
- Drill chuck arbor MT 1-3/8-24 UNF
- Cleaning brush
- Software application and soft copy teacher guide for MS-Windows PC (PC is not included)

REQUIRED ACCESSORIES

- Personal computer with MS Windows

SAFETY FEATURE

The following safety features are provided by the learning unit:

- The unit has an 'Emergency Stop' push-button that cuts off all electricity to the unit when pressed.
- The door around the spindle and material has limit switches that prevent any operation of the machine when the door is open.

The soft copy instructor guide contains detailed procedures for each hands-on activity.