



Ideal for the training of milling machine operators

# CNC Training Center MASTER

For advanced CNC knowledge and skills in the safe use of complex CNC production machines

## MASTER Package

- **Lathe System**  
with driven tools for turning, milling, drilling
- **Vertical Machining Center**  
with 4th and 5th axis
- SinuTrain training software
- Training PC
- Video camera
- Training material and documentation
- Detailed programming instructions



## THE MACHINES

### Proven CNC Production Machines

- For Education and Training.
- For batch manufacturing under production conditions.
- Fully equipped - from the tool changer to the standard chip conveyor

## SINUMERIK 828D CONTROL

### For demanding CNC applications

- ShopMill / ShopTurn for gaining practical experience while reducing programming times
- Quick and unique graphical visualization via animated elements plus integrated online help.

### StarChip 400 - CNC Lathe

- Turning diameter over bed 360 mm
- Z axis travel 550 mm
- C axis and 12-station VDI tool turret
- Mono-block casting frame with inclined bed design
- High-precision linear guides on all axes
- Rapid feed speeds up to 30,000 mm/min
- Increased productivity: Faster, bidirectional positioning of 8-station tool turret, hydraulic 3-jaw chuck with foot switch, and hydraulic tailstock

### X.mill 640 - CNC Vertical Machining Center

- Rapid feed 30 m/min
- X / Y / Z axis travel 640 x 400 x 500 mm
- 16-station tool changer with dual-arm gripper
- Divider with 4th and 5th axis
- Premium linear guides on all axes
- Powerful axis servo drives
- Heavy cast-iron machine body for maximum precision even at highest travel speeds and powerful chip removal operations
- Totally enclosed workspace with side doors

### Siemens Sinumerik 828D

- MDynamics with Advanced Surface
- Interactive input with animated elements
- Kinematic transformations

SINUMERIK 828D is a panel-based CNC control for demanding applications on lathes and milling centers that are typically used in workshops. It combines CNC, PLC, control and axis control functions in one compact, rugged unit.

The SINUMERIK 828D is made for handling complex machine kinematics – from classical face/cylindrical surface transformations on lathes to multi-sided machining on inclined planes. This makes the SINUMERIK a pioneer for advanced machine tool applications.

Large Look Ahead storage, Advanced Surface, and MDynamics allow reliable processing of large data volumes without compromising optimum surface quality.

Proven graphical support allows the operator targeted programming directly at the control using animated image sequences.