



## TITAN Training Package

# LEO 1600

## 6" Horizontal Turning Center

The LEO 1600, Doosan's compact 6-inch horizontal turning center, brings a FANUC Oi-F Plus control, a 10 horsepower high torque digital AC spindle motor and a 1.75" bar capacity to the shop floor. With the capabilities and features of much more expensive turning centers, it is the ideal machine to learn how to turn complex parts on.

### FEATURES AND STANDARD EQUIPMENT

- FANUC Oi-F Plus control
- 10 hp high torque digital AC spindle motor
- Large 1.75" bar capacity
- 6" Samchully 3-jaw chuck
- High speed 4,000 rpm spindle
- 8 station turret with 0.15 second next station index
- Large 12.6" maximum turning diameter
- 11.93" maximum turning length
- Fast 1,181 ipm Z-axis rapid traverse
- Compact design requires minimal floor space
- Rigid tapping
- Manual tailstock with MT#4 live center
- Work light
- Two-year machine parts warranty, one year labor warranty.  
Two-year control warranty (parts and labor).



### TRAINING PACKAGE INCLUDES

- Kennametal high-performance starter kit with 13 tools plus inserts
- Blaser Swisslube coolant starter package
- HAIMER Centro Coaxial
- Mitutoyo inspection tools training package
- Mastercam Educational Suite one-year subscription with post processor
- Machine installation and training

#### TITANS OF CNC PACKAGE PRICING AVAILABLE

Contact your Doosan Machine Tools distributor to get a quote

## Specifications

### Capacity

Swing over bed	470 mm (18.5")
Swing over carriage	300 mm (11.81")
Maximum turning diameter	320 mm (12.6")
Maximum turning length	303 mm (11.93")

### Spindle

Spindle speed	4,000 rpm
Spindle nose	A2-5
Draw tube ID	46 mm (1.81")
Spindle bore diameter	61 mm (2.40")
AC spindle motor (15 minute rating)	7.5 kW (10 hp)
Maximum spindle torque (15 minute rating)	72 Nm (53 ft-lb)
Standard chuck size	169 mm (6.65")
Standard chuck through hold ID	46 mm (1.81")

### Bed, Saddle & Cross Slide

Angle of slant bed	30°
X-axis travel	175 mm (6.89")
Z-axis travel	330 mm (12.99")
X-axis rapid traverse rate	30 m/min (1,181 ipm)
Z-axis rapid traverse rate	30 m/min (1,818 ipm)
X-axis feed thrust (continuous)	6,207 N (1,395 lb)
X-axis feed thrust (intermittent)	9,931 N (2,232 lb)
Z-axis feed thrust (continuous)	6,207 N (1,395 lb)
Z-axis feed thrust (intermittent)	6,931 N (2,232 lb)
X-axis repeatability	±0.002 mm (±0.00008")
Z-axis repeatability	±0.003 mm (±0.00012")

### Turret

Number of tools	8
Tool holder type	DI Base Holder
Turning tool shank size	(metric turret 25 mm) 1.0"
Boring bar diameter	(metric turret 32 mm) 1.25"
Turret index time (next station swivel time)	0.15 seconds
Tool selection	Bi-directional
Curvic coupling diameter	140 mm (5.5")
Turret dumping force	19.6 kN (4,406 lb)
Turret index repeatability	±0.0005 degree

### Tailstock

Tailstock center	MT #4 live
Maximum tailstock quill thrust	3.6 kN (810 lb)
Maximum tailstock hydraulic pressure	35 bar (507 psi)
Tailstock guideway span	196 mm (7.7")

### Coolant System

Coolant pump pressure	1.5 bar (21 psi)
Coolant pump motor	0.4 kW (0.54 hp)
Coolant tank capacity	133 l (35 gal)

## Specifications Continued

### Hydraulic / Lubrication

Hydraulic tank capacity	25 l (6.6 gal)
Hydraulic oil required	ISO VG32
Way lubrication tank capacity	2.0 l (0.5 gal)
Way lubrication oil required	ISO VG68

### General

Machine weight	2,600 kg (5,740 lb)
Floor space (length x width)	1,850 mm x 1,690 mm (72.8" x 66.5")
Floor space (length, with hinge belt chip conveyor)	2,974 mm (117")
Machine height	1,635 mm (64.37")
Height from floor to spindle center	980 mm (38.6")
Voltage required	205-235 V/3 ph/60 Hz
Power requirement	15 kVA (40 amps @ 220 volts)