



**HUR –TG7520** CNC thread grinding machine

## **Machine General Introduction**

### **Machine application**

This machine is a NC thread grinding machine developed specially for grinding precision thread gauges, able to grind internal threads and external threads on one machine.

### **General description**

Work spindle rotating and table reciprocating are ganged/linked to achieve spiral movement.

Work table travels along V-and-flat guide way (i.e. one guide way is V-located on the opposite end of wheelstock rotary drum).

The internal grinding wheel spindle adopts a high-speed (E-spindle) grinding wheel dressing by a diamond disc.

### **CNC system is SIEMENS 828D;**

These axes are all driven by SIEMENS servo motors

Bearings of table ball screw and wheelstock feedings ball screw are from world-famous brands.



### External threads

pitch is within 6mm:

pitch error:

adjacent pitch: 0. 003mm

in 25mm long: 0. 005mm

in 100mm long: 0. 006mm

in 300mm long: 0. 009mm

in the full thread length: 0.011 mm

half angle error:  $\pm 8'$

roundness:

$\varnothing < 100\text{mm}$ , 0. 003m

$\varnothing \geq 100\text{mm}$ , 0.005mm

cylindricity: 0. 008mm

surface finish: Ra 0.32  $\mu\text{m}$

### Internal threads

pitch is within 6mm

pitch error:

adjacent pitch: 0. 003mm

in 25mm long: 0. 005mm

in 100mm long: 0. 006mm

roundness: 0. 005mm

surface finish: Ra 0.4  $\mu\text{m}$

Item	Parameter
max. job diameter:	$\varnothing 200$
max. job length:	500
external grinding diameter:	$\Phi 2\text{-}200\text{mm}$
internal grinding diameter:	$\Phi 25\text{-}125\text{mm}$
external grinding length:	350mm
internal grinding length:	75mm
center height:	120mm
external pitch range:	1-24mm
internal pitch range:	0.5-6mm
external helix angle range:	$\pm 30^\circ$
internal helix angle range:	$\pm 6^\circ$
thread start number:	1-99

### Contact information

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table traverse speed (Z axis) :	0-3m/min (stepless)
wheelstock feeding speed (X axis) :	0-3m/min (stepless)
work spindle speed	
grinding (Caxis):	0.5-75r/min(stepless)
indexing:	4r/min
system resolution	
X. Z axis:	0.001mm
C axis:	0.001°
external wheel O. D:	Φ400-300mm
I.D.	Φ203mm
thickness:	10mm
internal wheel O.D:	Φ20-50mm
thickness:	6mm
wheel spindle speed	
external:	1650-2100rpm
internal:	30000rpm
wheel linear speed	
external grinding wheel:	35-45m/s
internal grinding wheel:	20-30m/s
max. job weight:	25kg
machine dimension (LxWxH):	2500*1800*1800mm
machine weight:	6500kg