CNC Grinder
TD Smart PLC control grinder
HADC Precision hydrostatic guide way
ADC Wheel top auto dressing and compensation
ACUMEN II Auto dressing and compensation on table

Innovation / Perfection / Technology / Value

EQUIPTOP HITECH CORP.
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EQUIPTOP HISTORY

1988 Established “EQUIPTOP MACHINERY CO., LTD.” Specialized in manufacturing high precision surface grinder.

1990 Developed ESG-618 & 818 ASD series, 3 axes fully automatic grinders. Applied PC-CAD to upgrade design and development.

1992 Developed ESG-1228 & 1232 ASD series, 3 axes fully automatic grinders.

1993 Developed ESG-1632 & 1640 ASD series, 3 axes fully automatic grinders.

1995 Developed ESG-1020 & 1224 ASD series, 3 axes fully automatic grinders.

1997 Executed ISO9002 program. Developed 2448 & 2480, 3 axes fully automatic digital positioning 500 series. This series features a downfeed jog movement providing just 0.5 m superfine for finer production finish.

1998 Awarded ISO certification by DNV of Netherlands.

1999 Invested in "NANJING EQUIPTOP PRECISION MACHINERY CO., LTD." as a branch to expand in China market.


1999 Developed the branch in Wu Han Shui Heng Precision Machinery LTD. to expand China market. Developed carthelier type ESG-6120-8300 ASDII series of 3 axes fully automatic surface grinders.

1999 Obtained the prize of Taiwan Precision Product in manufacturing NC surface profile grinder. Developed NC type vertical machining center 1100/1200/ 1400 series mass production. German branch established. EMV600/1020 was presented.

2000 Presented ETM-510APC auto pallet change drilling & tapping machining center and 1530~1550 series of double column grinders.


2002 Grand opening of a new factory with floor space of 13,000 。” Total investment of NT$160 million in this new headquarters. Successfully developed new complex grinder, moving into high tech field. Company renamed as “EQUIPTOP HITECH CORP.”

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2006 Presented ETM-510APC auto pallet change drilling & tapping machining center and 1530~1550 series of double column grinders.

2007 Presented moving column type 3 axes linear servo driven model series.

2009 Awarded PLC control, man-machine interface, and touch screen TD series surface grinder.

2010 Developed moving column grinder, 600x1200~600x2000mm series.

2012 Established the branch in Wu Han Shui Heng Precision Machinery LTD. to expand China market. Developed cantilever type vertical machining center 1100/1200/ 1400 series mass production. German branch established. EMV600/1020 was presented.

2013 Obtained the prize of Taiwan Precision Product in manufacturing NC surface profile grinder. Developed cantilever type vertical machining center 1100/1200/ 1400 series mass production. German branch established. EMV600/1020 was presented.
**Machine Features**

01 **Bushing Type High Precision Spindle**
Enlarged spindle set is supported by four preloaded precision angular contact ball bearings, and driven by V3 class motor. Suitable for heavy duty.

02 **Y/Z Axes with Reliable Direct Drive Transmission and Sharp Roller Type Linear Sliding Way**
Moving column type transmission structure with feeding by precision ballscrew ensures smooth motion, and precision roller type linear sliding way make sure the stable feeding rigidity and precision.

03 **High Rigidity Frame**
High-level cast iron construction of table, saddle and base is casted with high grade iron, strongly ribbed.

04 **Enlarged Column and Base**
High-stability and rigidly enlarged honeycomb-ribbed column and base especially suitable for heavy duty grinding.

05 **Auto Lubrication System**
Superior rail lubrication system and independent oil tank with circulate oil pump force oil running. Offer excellent lubrication effect to every ballscrew and rail sliding surface. Optional HADC series precision hydrostatic guide way is available. Enlarged Anti-friction hydrostatic sliding rail has no back gap and stick affection. Vibration is absorbed for better finish and precision. Anti-friction prolong machine life time.

06 **Cross and Elevation are driven by AC Servo Motor**
Ball screw for cross and elevation travel, powered by AC servo motor to provide rapid movement.

07 **Longitudinal Driven by Hydraulic**
X axis is driven by hydraulic, with high rigidity and stable travel speed. (Optional hydrostatic sliding rail is available.)

08 **Z and Y axes have coordinate feedback and display**
It saves optional digital readout. (Grinding wheel auto dressing and compensation and spindle inverter speed down are optional. Positioning and dressing to be done in one time.)
FEM analyzing for main castings and decked inside, reinforcing rib and inner stress relief annealing to upgrade the reliability of machine precision.

Spindle seat mechanism
Base mechanism

Chuck control with demagnetizer (Option)
MPG for Y/Z axis (Option)
Travel distance setting for Z axis (Option)

7.2” touch screen, colored TFT LCD
Spindle motor inverter (Option)

Z Axis Linear Rail Direct Drive Type Transmission Mechanism

Man-machine interface
PLC computer numeric setting with EQUIPTOP designed tableaux, easy learning and understanding of application program for operator.

Enlarged column
With high reliability and rigidity and honeycomb frame structure, the column is applicable for heavy load precision grinding.

Static sliding rail unit
Superior wearproof, the seat of enlarged double V sliding rail reduces speed ratio and friction. Eliminating back-gap and adhesion effect caused by sliding, absorb the vibration and ensure brilliant precision.

Auto lubrication
Circulating oil pump forces to lubricate screw and sliding surface. Extending life span of the machine.

Structure Drawings
Control Panel

FEM analyzing for main castings and decked inside, reinforcing rib and inner stress relief annealing to upgrade the reliability of machine precision.

Grinding feed (for rough, fine, and spark-out setting). Min. display unit for Y/Z axis is 0.001mm.

Abnormal message display for trouble shooting.

Start up screen: language selection
Monitor page to check input and output signal status and find out the fault easily.

Parts grinding dimension setting.
Management screen for operator and adviser.

Plc computer numeric setting with EQUIPTOP designed tableau, easy learning and understanding of application program for operator.

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Pou Yuen Control System Function

- Grinding job
- Surface grinding
  - Equidistant multi-plunge grinding
  - Equidistant ladder grinding
- Side grinding
  - Varied depth & distant multi-plunge grinding
  - Special type straight line grinding
  - (second stage)
- Grinding job
- Surface dressing
- T shape dressing
- Outer radius dressing
- Inner radius dressing
- Side dressing
- Special type straight line dressing
  - (second stage)
- Dressing requirement
  - Surface dressing
  - T shape dressing
  - Outer radius dressing
  - Inner radius dressing
  - Side dressing
- Special type straight line dressing
  - (second stage)
- Dressing parameter screen
  - Surface dressing
  - T shape dressing
  - Outer radius dressing
  - Inner radius dressing
  - Side dressing
- Screen specification

1.1 Main screen
1.2 Process parameter screen
1.3 Dressing parameter screen
1.4 Dressing selection screen

Four grinding process:
- plunge grinding, equidistant ladder grinding, and side grinding.
And five dressing type:
- surface dressing, T shape dressing, outer radius dressing, inner radius dressing, and side dressing.

Optional CE safety rear fence guard
Artificial intelligence evolution

- TD series: Minimum down feed value 1um. Position is settable for start point, fine grinding volume, target point, and rise up point. Easy operation by digit display and touch screen panel.

- Y axis is driven by AC servo motor for rapid up/down and for micro setting downfeed.

- Display window for Y axis position. It displays spindle head position. Start grinding point, downfeed volume for rough grinding, fine grinding point, downfeed volume for fine grinding, target point, rise up point, and intermittent no feeding spark-out can be set on the panel.

- Z axis saddle cross movement is driven by AC servo motor. Good for jog feed and constant feed grinding. Speed control for rough and fine grinding. Accomplish high efficiency.

- Cross grinding distance and position can be set by servo motor via PLC fast memory.
### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>TD-2546</th>
<th>TD-2554</th>
<th>TD-2564</th>
<th>TD-2646</th>
<th>TD-2654</th>
<th>TD-2664</th>
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<tbody>
<tr>
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<td>1200x1000x1000mm</td>
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<td>Max. grinding length</td>
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<td>Max. grinding width</td>
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<td>Max. distance from spindle center line to table surface</td>
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<td>Stand magnetic chuck size</td>
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<tr>
<td>Longitudinal movement of table</td>
<td>Max. travel/hydraulic, 1300mm</td>
<td>1600mm</td>
<td>1900mm</td>
<td>2100mm</td>
<td>2300mm</td>
<td>2500mm</td>
<td>2700mm</td>
<td>2900mm</td>
<td>3100mm</td>
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<td>Rapid traverse</td>
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<td>Crosswise : 4000mm</td>
<td>Longitudinal : 4000mm</td>
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<td>Standard wheel</td>
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<td>Truing wheel (L x W x H)</td>
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### Optional Accessories

- Adjustable speed rotary magnetic chuck
- Spare wheel flange
- Dynamic balancer
- Punch former
- Frequency inverter
- Coolant system
- Manual parallel dressing attachment
- Electric parallel dressing attachment
- Coolant system
- Auto paper feeding device with magnetic separator
- Halogen work light
- Enclosed splash guard
- Manual parallel dressing attachment
- Digital readout
- Electric magnetic chuck
- Auto paper feeding device with magnetic separator
- Precision vice

**Coolant system with hydraulic motor could reach constant temperature for hydraulic oil by way of precision assurance**

1. TD: Smart PLC control grinder
2. ADC: Wheel top auto dressing and compensation
3. ACUMENII: Auto dressing and compensation on table
4. CNC: Computer control system