

## Press Release

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October 30, 2024

### **Vertical Multi-Process Grinding Machine "Vertical Mate 85 2<sup>nd</sup> Generation"**

TAIYO KOKI Co., Ltd. is pleased to announce a successor model of CNC Vertical Multi-Process Grinding Machine "Vertical Mate 85".

Since its launch in 2010, it has been well received by customers in a variety of industries, including aircraft, automotive, industrial machinery, machine tools and semiconductors for its ability which single grinding spindle performs high-accuracy process (roundness:  $1.0 \mu\text{m}^*$ ) of ID, OD and face with one-time chucking.

As one of our best-selling products, the previous generation has had more than 300 orders to date. Vertical Mate 85 2<sup>nd</sup> Generation has significantly upgraded performance by using the feedback from customers. \*1 Evaluation of TAIYO KOKI standard test piece

Equipped with the *speedMASTER* LongNose grinding spindle developed with DMG MORI, it achieves max. power output : 18.5 kW, torque : 35.3 N·m, and max. rotation speed : 10,000 min<sup>-1</sup>.

The mechanical structure is thoroughly optimized through FEM analysis and vibration testing. The machine back cover has been added as standard and reviewing the machine base structure, 2nd Generation minimizes the influence of heat on dimensional changes. It provides even better thermal stability and accuracy than the conventional model.

The operation panel is changed to *ERGOLine X* with large-screen touch panel and easy-to-press hard buttons. Its user-friendly design provides increased visibility and operability.

It also supports Digital Transformation (DX) with Service platform : *myDMG MORI*, Visualizing machine operating conditions : DMG MORI Messenger, etc., and provides anti-virus security with whitelist-type software.

Compared to the first generation, Vertical Mate 85 2<sup>nd</sup> Generation is more economical, it uses energy more efficiently by reducing power consumption 15% compared to the previous model.

Automatic measuring device and Z-axis scale, which are essential for high-precision grinding, are now included as standard.

By changing tank from single-layer to double-layer, the coolant cleanliness is further improved. It reduces the frequency of coolant replacement. In addition, paper filter as option is able to remove large amounts of grinding swarf and wheel particles which prevents clogging and machine stops.

Built-in mist collector *zeroFOG*, which collects fine particles (particle size:  $0.3 \mu\text{m}$ ) is also available as optional item.

Vertical Mate 85 2<sup>nd</sup> Generation will be exhibited at "JIMTOF2024" from 5<sup>th</sup> to 10<sup>th</sup> November 2024 as world premiere. We look forward to seeing you there.

We will continue to develop highly functional, reliable, and investment-worthy products to the market in order to meet various needs of more customers and expand overseas sales as DMG MORI Precision Grinding.

Detailed information on TAIYO KOKI website:

<https://www.taiyokoki.com/en/products/vertical-mate-85/>

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Vertical Mate 85 2<sup>nd</sup> Generation



Vertical Mate 85 2<sup>nd</sup> Generation Machine inside view

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+ 3-year warranty

+ Tool Type: HSK-E100

+ Maximum output: 18.5kW / 22 kW \*

+ Maximum rotation speed: 10,000 min<sup>-1</sup>/15,000 min<sup>-1</sup> \*

+ Through spindle coolant \*

\*Option

### Vertical Mate 85 2<sup>nd</sup> Generation Grinding spindle *speedMASTER* LongNose



+ Every detail is designed for ease of use

+ Automatically displayed necessary functions

depending on operating situations by HYBRID BAR

+ Dustproof and waterproof structure (International Protection IP54)

+ Comfortable and safe operation

(Obtained CE marking certification)

### Vertical Mate 85 2<sup>nd</sup> Generation *ERGOline X* with *CELOS X*

#### Industrial machinery

Straight Gear



φ670mm x 260 mm (SNCM420)

#### Machine Tool

Stator Case



φ300mm x 500 mm (SCM435)

#### Machine Tool

Chuck Body



φ600mm x 140 mm (SCM)

### Vertical Mate 85 2<sup>nd</sup> Generation Sample of Workpieces