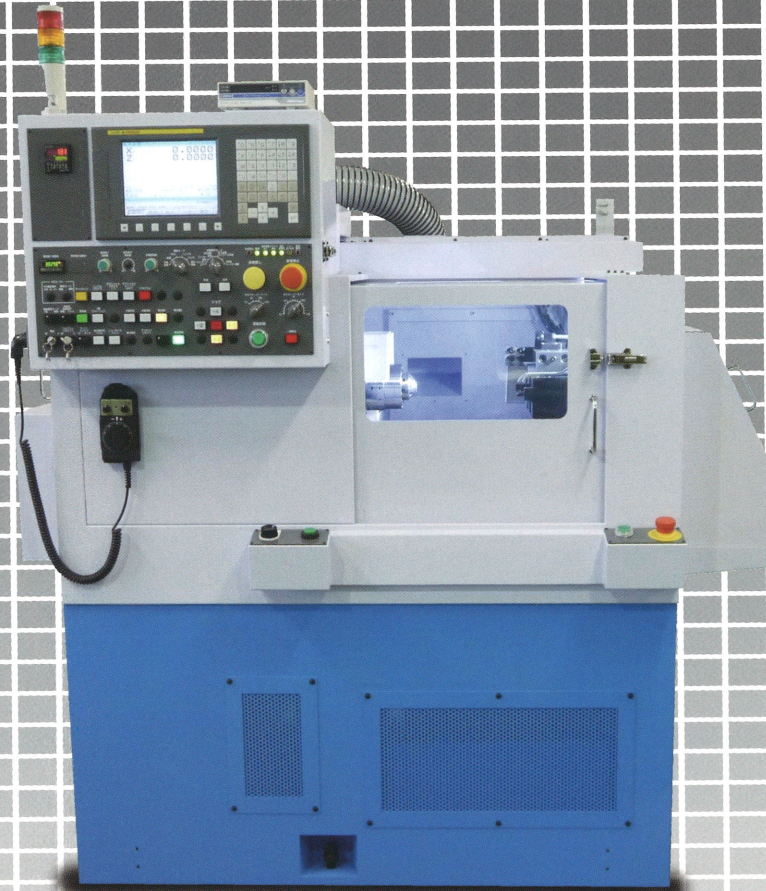


# ***KGIs***series

## ***KG1-20N***

CNC Lathe Grinder

■ Cost-effective grinder enabling hard turning and grinding with a single chuck!



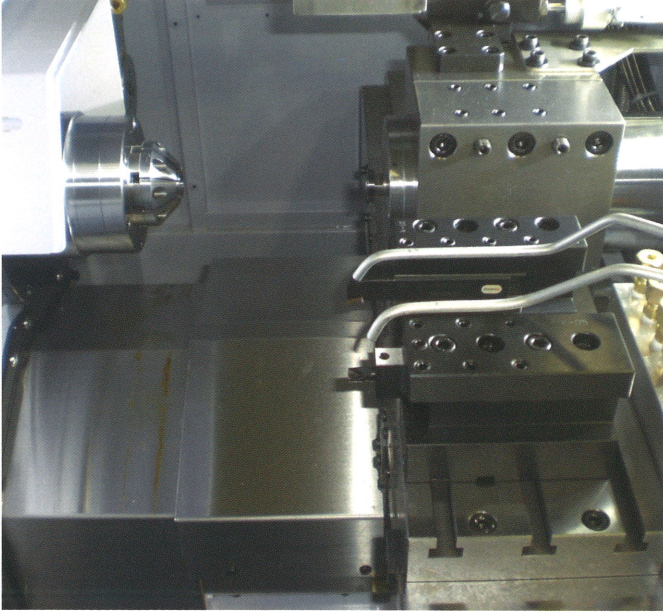
※ The machine shown in this photo is fitted with special options.

### ■ Characteristics

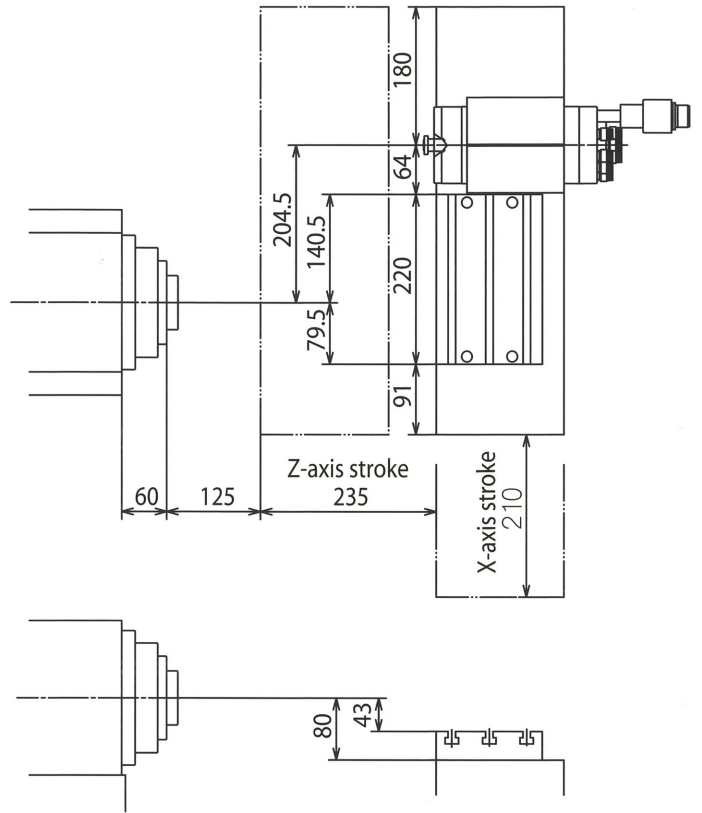
- Allows hard turning and grinding in a single process.
- Allows composite processing with a single chuck, enabling high-precision processing.
- Features a high-precision and high-rigidity spindle. High-speed spindle enables highly efficient machining.
- Supports high-speed (sine) oscillation during grinding.
- Tool post structure supports hard turning and high-speed oscillation during grinding.
- Features a high-frequency spindle designed for high-rigidity and increased output.
- Rotary dresser and other useful options.



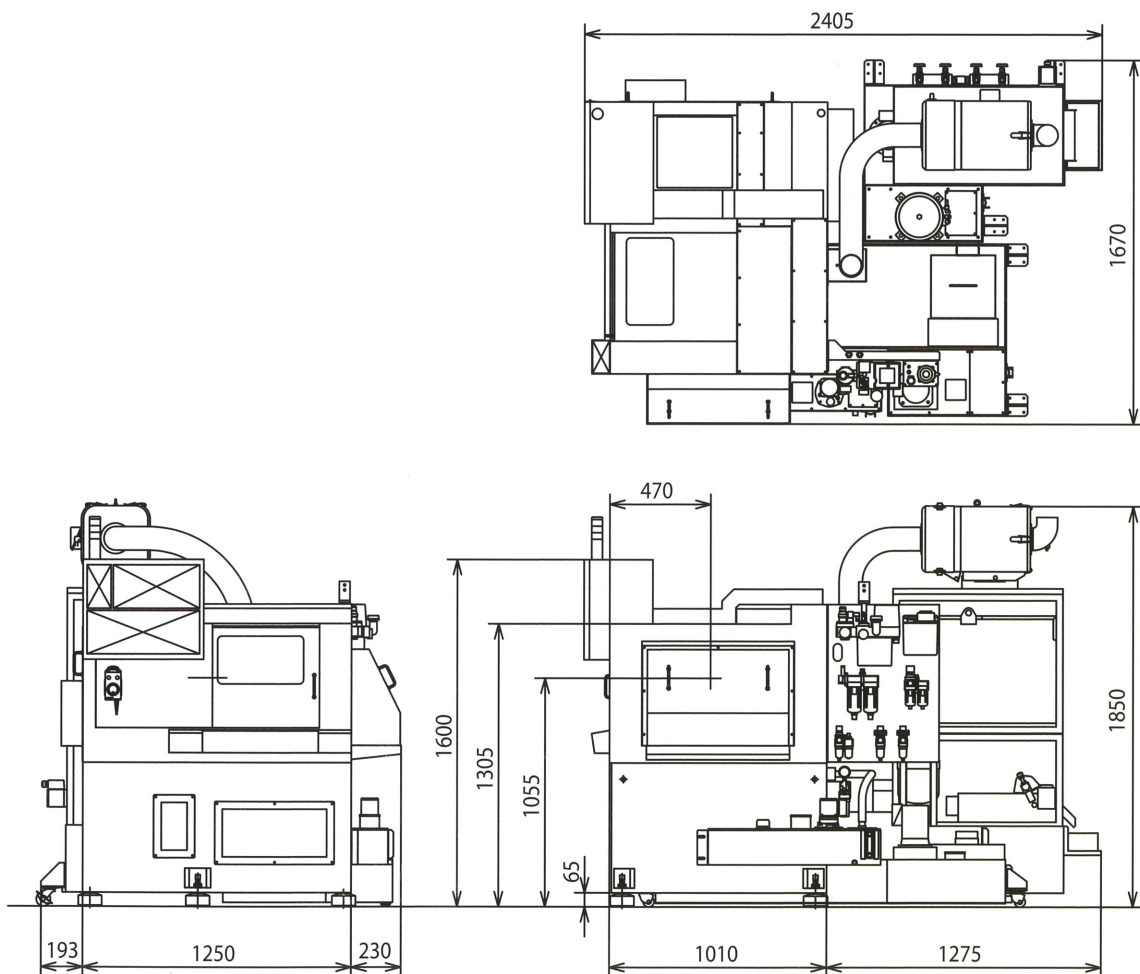
## Tooling Area



※ When using a diaphragm chuck



## Outline Dimensional Diagram



| Machine Specifications  |   |  |
|---|---|--|
| Workpiece   | Inside diameter                             | For $\phi$ 0.5 mm to $\phi$ 30 mm grinding         |
|   | Maximum outside diameter                    | MAX. $\phi$ 60 mm                                  |
|   | Maximum width                               | MAX. 50 mm   |
| Spindle base  | Spindle speed                               | MAX. 5,000 min <sup>-1</sup>                       |
|   | Number of spindle speed ranges              | Step-less (S4 digits)                              |
|   | Fine tuning swiveling angle                 | $\pm 0.2^\circ$                                    |
| Grinding-wheel spindle  | Motor                                       | 3.7/5.5 kW   |
|   | Grinding-wheel spindle type                 | High-frequency spindle                             |
|   | Number of spindles attached                 | 1  |
| X-axis slide (cutting)  | Travel amount                               | 210 mm   |
|   | Rapid traverse rate                         | 15 m/min   |
|   | Least input increment                       | 0.0001 mm  |
|   | Guide surface                               | Slide guide (continuous lubrication)               |
|   | Motor                                       | 1.0 kW   |
| Z-axis slide  | Travel                                      | 235 mm   |
|   | Rapid traverse rate                         | 15 m/min   |
|   | Minimum input increment                     | 0.0001 mm  |
|   | Guide surface                               | Slide guide (continuously circulating lubrication) |
|   | Motor                                       | 2.5 kW   |
| Others  | Required electric power                     | 200 VAC 50/60 Hz 15 kVA                            |
|   | Height of machine                           | 1,850 mm   |
|   | Required floor space (width $\times$ depth) | 1,670 $\times$ 2,405 mm                            |
|   | Mass  | Approx. 1,300 kg                                   |
| <b>Standard accessories</b>   |   |  |
| <ul style="list-style-type: none"> <li>· Coolant device</li> <li>· Coolant pump</li> <li>· Magnet separator</li> <li>· Work light (LED)</li> <li>· Machine mount</li> </ul> |   |  |

| CNC Standard Specifications  |  |                |
|--|--|----------------|
| Control unit   | KNC & FANUC 0i-TD (standard)   |                |
| Controlled axes  | Simultaneously controllable 2 axes, 2 axes in manual mode            |                |
| Input method   | MDI keyboard input, combined use of absolute/incremental programming |                |
| Program memory capacity  | 512 KB (1280 m on table length basis)                                |                |
| Interpolation  | Linear, taper, circular  |                |
| Least input increment  | 0.0001 mm  |                |
| Least command increment  | X-axis   | 0.00005 mm     |
|  | Z-axis   | 0.0001 mm      |
| Tool offset  | Geometry   | $\pm 999.9999$ |
|  | Wear   | $\pm 9.9999$   |
| Tool offset pairs  | 64 pairs   |                |
| Number of programs that can be registered  | 400  |                |
| Manual handle feed   | 0.5/0.1/0.01/0.001 mm  |                |
| Auxiliary function   | M3 (three commands specifiable simultaneously), S4, T4 digits        |                |
| Feedrate override  | 0 to 150%  |                |
| Rapid traverse override  | F0, 25, 50, 100%   |                |
| Input/output interface   | RS-232C/memory card/USB memory stick                                 |                |
| Display language   | Japanese/English/Chinese/French/German/Italian/Spanish/Korean        |                |
| <b>Other standard specifications</b>   |  |                |
| <ul style="list-style-type: none"> <li style="width: 50%;">· Canned cycles (G90, G92, G94)</li> <li style="width: 50%;">· Programmable data input (G10)</li> <li style="width: 50%;">· Inch-metric conversion</li> <li style="width: 50%;">· G code system A</li> <li style="width: 50%;">· Background editing</li> <li style="width: 50%;">· Constant surface speed control</li> <li style="width: 50%;">· Run hours and parts count display</li> <li style="width: 50%;">· Direct drawing dimension programming</li> <li style="width: 50%;">· Graphics function</li> <li style="width: 50%;">· Radius compensation</li> <li style="width: 50%;">· Polar coordinate interpolation (G112, G113)</li> <li style="width: 50%;">· Conversational programming with graphics function</li> <li style="width: 50%;">· Cylindrical interpolation (G107)</li> <li style="width: 50%;">· Custom macro</li> <li style="width: 50%;">· Directory display of floppy cassette</li> <li style="width: 50%;">· Addition of custom macro common variables</li> <li style="width: 50%;">· Workpiece coordinate system (G52 to G59)</li> <li style="width: 50%;">· Unexpected disturbance torque detection</li> <li style="width: 50%;">· Sequence number search</li> </ul> |  |                |

## Special Accessories

- Variety of high-frequency spindles for grinding wheels
- Mist collector
- Diaphragm chuck
- Oil temperature controller (coolant)
- Air chuck
- Signal tower (three-stage)
- Rotary dresser
- Preset counter
- Single-point dresser
- Automatic door
- Automatic sizing device
- Variety of loaders



High-frequency spindle

※Please feel free to contact us for other options of customization to your specifications.

※The above specifications may be different from the photograph.

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●Note: Specifications subject to change without notice for improvements and modifications.