

GHT SERIES

-Box way type Turning lathe

GHT220/M GHT260/M GHT310/L GHT360



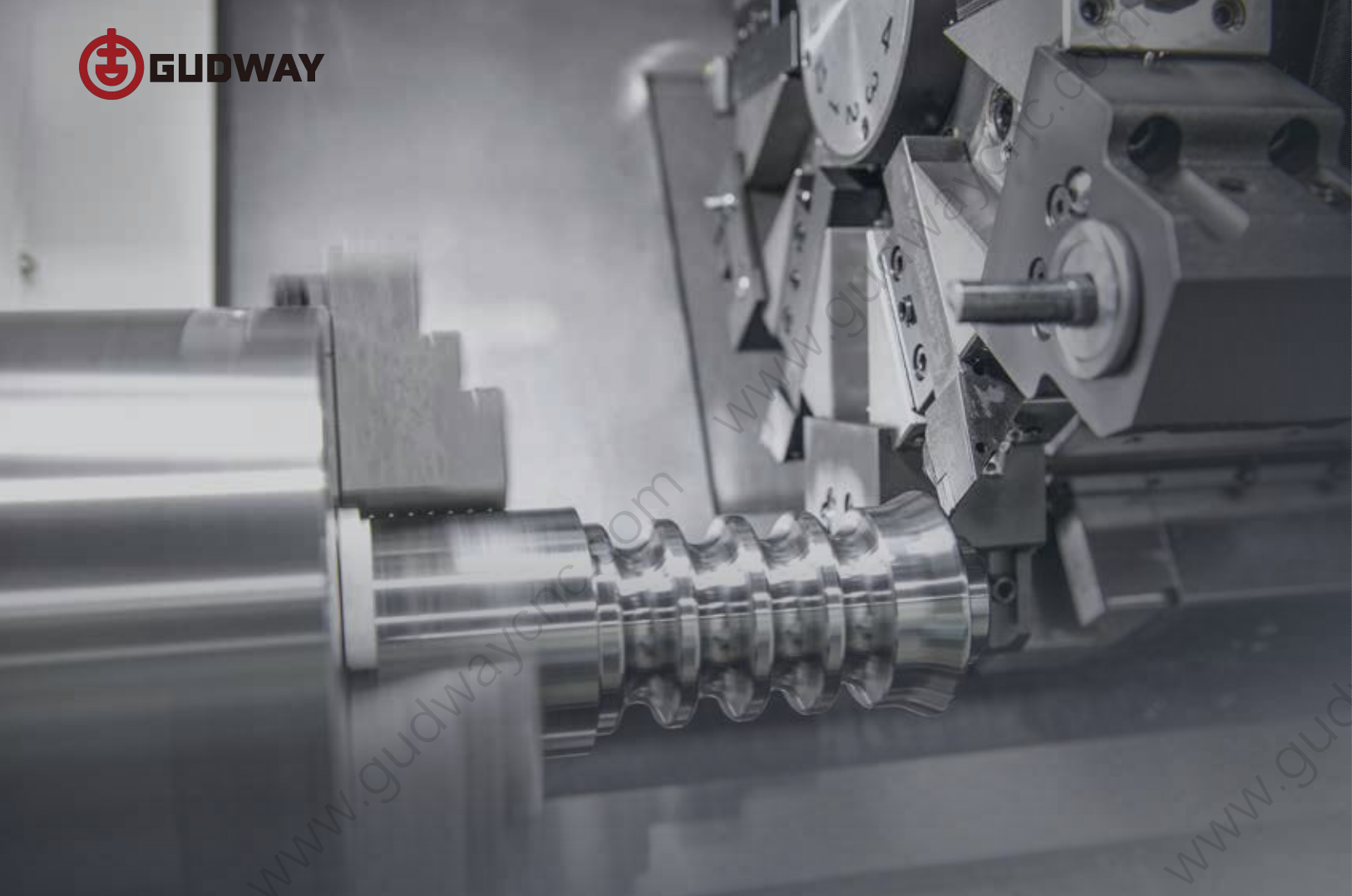
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Technical Leader

The GHT series, designed and manufactured based on years of professional experience and the latest technology, makes the machine a turning center that can maximize production and performance.

| ITEM | SPINDLE | | | | BED (Z) | | | Servo tool tower | | Milling cutter tower |
|---------|---------|-----|-----|-----|---------|-------|---------|------------------|------------|----------------------|
| | 8" | 10" | 12" | 15" | 580mm | 680mm | 1,350mm | 10position | 12position | BMT55 |
| GHT220 | • | | | | • | | | | • | |
| GHT220M | • | | | | • | | | | • | • |
| GHT260 | | • | | | • | | | | • | |
| GHT260M | | • | | | • | | | | • | • |
| GHT310 | | | • | | | • | | | • | |
| GHT310M | | | • | | | • | | | • | • |
| GHT360 | | | | • | | | • | • | | |

GHT series

A new generation of high precision CNC lathe for heavy cutting

- Hard rail to achieve strong heavy cutting characteristics
- Optimized design of each unit structure to minimize thermal deformation
- At the same time, the mechanical structure is easy to achieve highly productive operations and can be extended
- Strong fast moving speed: 30m/min (Z-axis)
- High speed servo cutter with excellent rigidity (cutter tray width increases)
- Ergonomic structure design is easy to operate and maintain



01 GHT220/260 series

8 inch /10 inch heavy machinable CNC turning center with productivity

Power tower '(M' type)

- BMT55 (12 knife positions)
- 6000 r/min
- Jacket size: Ø16 (ER25)

Tailstock

- MT#4
- Sleeve diameter: Ø65
- Sleeve stroke: 80mm

High precision spindle

- One-piece bed & heat-proof rib structure
- GHT220/220M : 8"
- GHT260/260M : 10"
- C-axis control: 0.001° '(M' type)



Suitable for heavy cutting high-precision machining structure

One-piece bed

High precision and high rigidity integrated bed

The 45° inclined bed with square and cylindrical reinforcement structure greatly improves the retention of high rigidity. The ability to absorb vibration is outstanding, and can maintain high accuracy while carrying out heavy cutting.

Integrated cutting fluid tank

The cutting fluid box is installed in front of the bed, improving the ease of use, while the iron filings can be cleaned on the right side of the machine.



Guide rail

Hard rail

All axes of the GHT220/260series use a hard rail design with good mobility. Especially in the heavy cutting process, it can offset the vibration transmitted from the feed shaft, which can meet the high precision product processing.

Seal GIB structure

The GHT220/260series X-axis guide mounting surface adopts the sealed GIB structure, which can minimize the damage caused by the chip of the X-axis guide and improve the processing capacity.

Z-axis high-performance motor

The feed capacity of the Z-axis is greatly enhanced by the installation of a high-performance servo motor.
(Z-axis fast moving speed: 30 m/min)



Fast moving speed (X/Z)

24/30 m/min

Travel (X/Z)

235/580 mm

02 GHT310/GHT360 series

12 inch /15 inch heavy machinable CNC turning center with productivity

Turret

- GHT310/310M : 12 tool positions
- GHT360 : 10 tool positions
- OD/ID : □25/Ø50
- BMT55 : 6,000 r/min (GBT310M)
- Jacket size : Ø16 (ER25)

Tailstock

- MT#5
- Sleeve diameter: Ø100
- Sleeve stroke: 120mm

High precision spindle

- One-piece bed & heat-proof rib structure
- GHT310/310M: 12" (3,000 r/min)
- GHT360: 15" (2,500 r/min)
- C Axis control: 0.001° ('M' type)

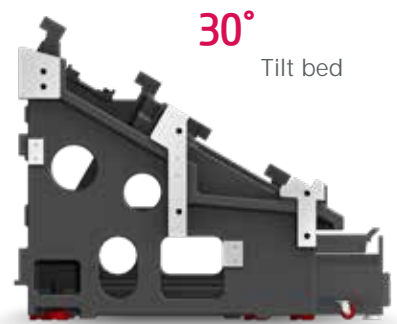


Suitable for heavy cutting high-precision machining structure

One-piece bed

Optimal structural analysis

Through structural analysis, the main unit structure is optimized, the height of the equipment is reduced, and the dynamic rigidity of the bed can be maintained in the process of heavy cutting. Moreover, GHT310/3608series adopts a 30-tilt inclined bed, which greatly improves its processing stability.



Integrated cutting fluid tank

The cutting fluid box is installed in front of the bed, improving the ease of use, while the iron filings can be cleaned on the right side of the machine.

Guide rail

Hard rail

The whole shaft adopts hard rail, and the heavy cutting process also has excellent vibration absorption capacity, ensuring the processing of high quality products. Special Z axis through the long axis design, the processing of products with long axis length shows superior performance.

Seal GIB structure

The X-axis guide mounting surface adopts the sealed GIB structure, which can minimize the damage caused by the chip of the X-axis guide and improve the processing capacity.

Fast moving speed (X/Z)

24/30 m/min



The 6-side constraint design improves mobility

Travel (X/Z)

GHT310/310M

265/680 mm

GHT360

295/1,350 mm

03 High precision spindle

High precision spindles that consistently maintain high precision and excellent performance over a long period of time

Spindle

[]: OP

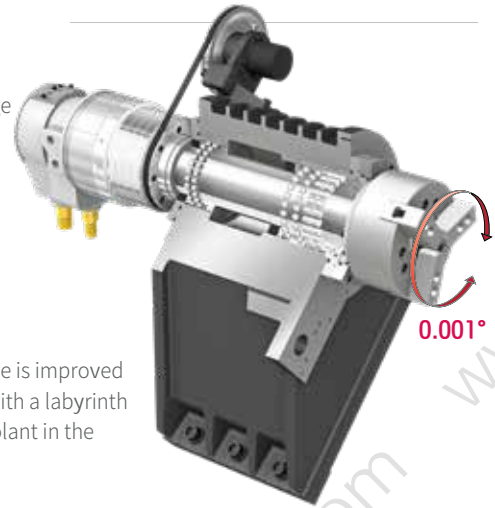
| Item | Speed | Power (Max/continuous) | Torque (Max.) | Drive |
|----------------------|---------------|------------------------|-------------------|-----------|
| GHT220 series | 4,000 r/min | 18.5/15 kW | 206/125.3 N·m | Belt type |
| | [4,000 r/min] | [18.5/15 kW] | [353.2/214.8 N·m] | |
| GHT260 series | 3,000 rpm | 18.5/15 kW | 300.2/182.6 N·m | |
| GHT310 series | 3,000 rpm | 18.5/15 kW | 470.9/286 N·m | |
| GHT360 | 2,500 rpm | 26/18.5 kW | 1,123/657 N·m | Gear |
| | [2,500 rpm] | [35/22 kW] | [1,613/1,014 N·m] | |

Heavy cutting & High precision

Spindle

Special spindle for heavy cutting

The spindle design uses a structural design usually found in large machine tools, and the combination of cone roller bearings and angular contact ball bearings results in excellent heavy cutting capability. In particular, the GHT360 offers the option of a gear-type spindle, [gear type torque :1,613 N.m] to meet customer requirements for powerful heavy cutting functions.



RIBSTAR multi-wedge belt

By adopting RIBSTAR multi-wedge belts, machining performance is improved and belt slip problems are minimized. The spindle is designed with a labyrinth structure to reduce possible bearing damage caused by the coolant in the spindle and improve machining stability.

C axis control (GHT220M/260M/310M)

By using the standard C-axis 0.001° control function on the spindle, products of all shapes are guaranteed to be processed.

Tailstock

GHTseries standard tailstock can achieve high quality and stable processing of products and tailstock sleeve travel up to GHT220/260: 80mm, GHT310/310M/ 360:120mm, greatly expanding the range of support.

| Item | GHT220/260series | GHT310/360series |
|---------------|------------------|------------------|
| Taper | MT#4 tailstock | MT#5 tailstock |
| Sleeve dia | Ø65 mm | Ø100 mm |
| Sleeve travel | 80 mm | 120 mm |



04 Servo turret

High reliability servo tool tower with high speed and high precision

Servo turret

[]:OP

Number of tools installed

12^{EA}

GHT360 : 10 EA

Tool specifications (OD/OD)

□ 25/Ø40 mm

GHT310/310M/360 : □ 25/Ø50 mm

Indexing time

0.12^{sec}

Power tower parameters

| Model | Max Speed | Power (Max/continuous) | Torque (Max/continuous) | Jacket size |
|-------|-----------|------------------------|-------------------------|-------------|
| BMT55 | 6,000 rpm | 5.5/3.7 kW | 52.5/26.5 N·m | Ø16 (ER25) |

High precision cutter tower controlled by servo motor

Turret

Servo tool tower

The tool tower adopts high-performance AC servo motor to improve the reliability of machining. The 3-piece coupling shows good indexing performance. The powerful tool clamping force can minimize the deformation of the blade end caused by the load, and the outstanding performance is suitable for heavy cutting.

OPTION

20Bar high pressure coolant 20bar
The turret structure, which can be used smoothly even under high pressure of up to 20bar, shows excellent performance in machining difficult-to-cut materials.

Rigidity is enhanced by increasing the width of the tool tray body. The inner diameter was increased by 20% and the outer diameter by 3%.

GHT310

90 mm

20% ↑

GHT360

120 mm

20% ↑

Power tool tower

BMT55 (GHT220M/260M/310M)

The BMT turret uses 4 bolts to firmly hold the tool holder, which provides excellent performance during heavy cutting, and the use of power tools enables high value-added product processing.

Power head (axial)



Power head (radial)



Driven Tool

Machining capacity is greatly enhanced with axial and radial milling power heads for machined product sides and inside diameters. Moreover, it can install a variety of rotary tools such as drill, tap, end mill, etc., which can significantly improve productivity and processing efficiency.



A variety of rotary tools

OPTION

GHT220/260/310series Machining of high value-added products with a wide range of rotary tools. In particular, the compound tool holder that can be installed with a variety of tools on a tool holder can be applied from the eccentric rotary tool that can process the eccentric part without the movement of another shaft to the drilling inclined hole and the hobbing tool holder, so as to realize the intensification of multiple processes with one device.

05 Convenience

Diversified configuration, customers more convenient to use

Rod transfer system



Rod conveyor

It can realize the unmanned processing of bar material and greatly improve the efficiency of processing.



Feeder

The single processed product after processing the bar material is automatically connected to the device outside the equipment for easy operation.



Auto door

The M code enables automatic opening and closing of doors, improving energy efficiency and convenience when equipped with automation.



Discharge conveyor track

The finished parts connected by the feeder are automatically moved to the workpiece bin to improve the working efficiency.



Automatic

When the truss manipulator group automatic line is used, it is not necessary to open the entire door, and automation can be formed by automatic shutter.

High precision system



Auto tool setting gauge

With the M code, operators can quickly and accurately implement tool compensation. Therefore, there is no need to test cutting, detection, calculation, input compensation value and other work, beginners can compensate within 30 seconds.



Linear grating ruler

The linear grating ruler can achieve high precision positioning and compensate the thermal deformation of the ball screw, which can be processed more precise products.



Job measuring device

By detecting the contact signal between the device and the workpiece, the processing basis of the workpiece is measured, and the coordinate value of the basic coordinate system is automatically set.

Chip removal solutions



Chip-conveyor

With the development of CNC machines and cutting tools, the effective treatment of a large number of chips generated by processing equipment can improve production efficiency and improve the working environment and working conditions.

| | | | |
|-------------|--|---------------------------------|----------------|
| Hinge | Chip type: rough processing chip, strip chip, compound chip | Material: SS41, 45C, cast steel | |
| | It is beneficial to deal with the large amount of chips and the phenomenon of chips together. | | |
| Scraper | Chip type: Easy broken chip | Material: Cast iron, non-iron | |
| | Easy to handle chip breakage. | | |
| Spiral | Chip type: Fine chip with low specific gravity | Material: Steel, castings | Forward right/ |
| | The chips are compressed and discharged, and the situation of the chips curling and winding is less. | | rear discharge |
| Drum filter | Chip type: Powder, fine chip | Material: Aluminum | |
| | Fine chips will not flow into the cutting fluid nozzle, which is conducive to machining accuracy. | | |

Cooling Unit & ECO system



Standard coolant (nozzle)



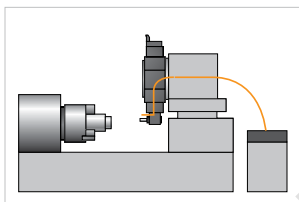
Coolant above chuck



Blow air above the chuck



Air gun



MQL: Minimal lubrication



Oily water separating installation



Oil mist collector



Oil lubricator

Technical Specifications

Standard & Optional

● : Standard ○ : Optional ☆ : Consult - : N/A

| | | GHT220 | GHT260 |
|--|-----|--------|--------|
| Spindle | | | |
| Spindle hollow chuck 3 jaw | 8" | ● | - |
| | 10" | ○ | ● |
| | 12" | - | ☆ |
| | 15" | - | - |
| | 15" | - | - |
| Standard soft claw (set) | | ● | ● |
| High torque spindle (353 N·m) | | ○ | - |
| Chuck clamp foot switch | | ● | ● |
| 2 stage pressure hydraulics | | ○ | ○ |
| Spindle built-in quasi-stop block | | ☆ | ☆ |
| Chuck clamp/release confirmation device | | ○ | ○ |
| 2 stage chuck foot switch | | ○ | ○ |
| Turret | | | |
| Holder | | ● | ● |
| Milling cutter tower | BMT | - | - |
| Straight milling head | | - | - |
| Chuck type, 1ea | | - | - |
| Angle milling head (radial) | | - | - |
| Chuck type, 1ea | | - | - |
| Straight milling head | | - | - |
| Adapter type | | - | - |
| Angle milling head (radial) | | - | - |
| Adapter type | | - | - |
| Reduction sleeve | | ● | ● |
| Sleeve | | ● | ● |
| U Drill tool base | | ● | ● |
| U drill sleeve | | ● | ● |
| U Drill end cover | | ○ | ○ |
| OD extension tool holder | | ● | ● |
| OD diameter | | - | - |
| Angle head | | - | - |
| Tail seat & center cage | | | |
| Sleeve type tailstock | | ● | ● |
| MT#4 | | - | - |
| MT#5 | | ○ | ○ |
| Built-in tailstock | | ○ | ○ |
| MT#4 | | - | - |
| Programmable tail seat | | ○ | ○ |
| Manual hydraulic center frame | | ☆ | ☆ |
| Standard live center (tail seat: standard) | | ● | ● |
| High precision live center | | - | - |
| Sleeve forward/backward confirmation device | | ○ | ○ |
| Tail seat foot switch | | ○ | ○ |
| Cooling unit & blowing unit | | | |
| Standard cooling unit | | ● | ● |
| Coolant above chuck | | ○ | ○ |
| Coolant gun | | ○ | ○ |
| Spindle center outlet (for special chucks only) | | ☆ | ☆ |
| Power tool center water | | - | - |
| Air blowing device above chuck | | ○ | ○ |
| Tailstock blow (top) | | ○ | ○ |
| Turret blows | | ☆ | ☆ |
| Air gun | | ○ | ○ |
| Spindle center air blower (for special chucks only) | | ☆ | ☆ |
| Standard coolant | | ● | ● |
| 0.4Bar | | - | - |
| High pressure coolant | | ○ | ○ |
| 6Bar | | - | - |
| 20Bar | | - | - |
| Bed rinse coolant | | ○ | ○ |
| 0.4Bar | | - | - |
| (only for rear chip extractor) | | ○ | ○ |
| 6Bar | | - | - |
| Powerful cooling system (for automated operation) | | ☆ | ☆ |
| Coolant unit (auxiliary water tank for chip remover) | | ☆ | ☆ |
| Chip removal | | | |
| Cutting fluid tank or coolant tank | | ● | ● |
| Lateral | | - | - |
| Rear | | ○ | ○ |
| Side (20bar) | | ○ | ○ |
| Rear (20bar) | | ○ | ○ |
| Chip-conveyor (Tank location/chip handling) | | ○ | ○ |
| Front (right discharge) | | - | - |
| Rear (rear discharge) | | ○ | ○ |
| Special chip extractor | | ☆ | ☆ |

| | | | |
|---|-------|---------------|---------------|
| ST (180 ℓ) | | ○ | ○ |
| Reverse(200 ℓ) | | ○ | ○ |
| Plus big flip(370 ℓ) | | ○ | ○ |
| Extra large size (470 ℓ) | | ○ | ○ |
| Customized | | ☆ | ☆ |
| Safety device | | GHT220 | GHT260 |
| Full protection | | ● | ● |
| Electrical installation | | | |
| Monochrome warning light | | 1 color : ● | ● |
| 3-color light with buzzer | | 3 color : ● | ○ |
| Electric cabinet lighting | | ○ | ○ |
| Portable hand wheel | | ☆ | ☆ |
| Job counter | digit | ○ | ○ |
| Total counter | digit | ○ | ○ |
| Tool counter | digit | ○ | ○ |
| Compound tool counter | digit | ○ | ○ |
| Leakage protection device | | ○ | ○ |
| AVR (Automatic Voltage Regulator) | | ☆ | ☆ |
| Transformer | | ○ | ○ |
| 25kVA | | - | - |
| Auto Power Off (Auto Power Off) | | ○ | ○ |
| Measurement | | | |
| Manual fast tool setting instrument | | ○ | ○ |
| Automatic Fast Tool Setting Instrument (Renishaw) | | ○ | ○ |
| Airtight testing device (For special chucks only) | | ○ | ○ |
| SMC | | - | - |
| Aut workpiece measuring | | ○ | ○ |
| OLP40 | | - | - |
| Linear grating ruler | | X | ○ |
| Z | | ○ | ○ |
| Coolant detection (for chip extractor, float type only) | | ☆ | ☆ |
| Thermal deformation compensation | | ○ | ○ |
| 4-channel | | - | - |
| Environmental | | | |
| Electric cabinet air conditioning | | ○ | ○ |
| Oil mist collector | | ○ | ○ |
| Oil-water separator | | ○ | ○ |
| MQL (minimal quantities of lubricant) | | ☆ | ☆ |
| Fixtures and automation devices | | | |
| Auto door | | ○ | ○ |
| Automatic shutter (for automated systems only) | | ○ | ○ |
| Secondary operation panel | | ☆ | ☆ |
| Bar conveyor interface | | ○ | ○ |
| Bar conveyor | | ☆ | ☆ |
| Work ejector device | | ☆ | ☆ |
| Extra M-code 4ea | | ○ | ○ |
| Automation Interface | | ☆ | ☆ |
| I/O module expansion (in / out) 24/16 | | ○ | ○ |
| Feeder | | ○ | ○ |
| Spindle | | - | - |
| Turret push device (automatic) | | ☆ | ☆ |
| Discharge transfer device (spindle side adapter required) | | ☆ | ☆ |
| Front simple automation | | ☆ | ☆ |
| Hydraulic device | | | |
| Standard hydraulic cylinder | | Hollow | ● |
| Standard hydraulic unit | | 35bar/13 ℓ | ● |
| Software | | | |
| Instruction (HW-MCG) | | ○ | ○ |
| Energy Saving System (HW-ESS) | | ○ | ○ |
| Tool monitoring (HW-TM) | | ○ | ○ |
| DNC software (HW-eDNC) | | ○ | ○ |
| Monitoring system (HW-MMS) | | ○ | ○ |
| interactive routine (HW-DPRO) | | ○ | ○ |
| Other | | | |
| Adjust tools and toolboxes | | ● | ● |
| Custom Colors | | Munsel NO. | ☆ |
| CAD/CAM software | | ☆ | ☆ |

◆ When high pressure coolants above 6bar are used, a 4-channel thermal deformation compensation device is recommended for high quality product processing.

Performance parameters are subject to change without notice.

Standard & Optional

● : Standard ○ : Optional ☆ : Consult - : N/A

| Spindle | | GHT220M | GHT260M |
|--|------------------------------|---------|---------|
| Spindle hollow chuck 3 jaw | 8" | ● | - |
| | 10" | ○ | ● |
| | 12" | - | ☆ |
| | 15" | - | - |
| Standard soft claw (set) | | ● | ● |
| High torque spindle (353 N·m) | | ○ | - |
| Chuck clamp foot switch | | ● | ● |
| 2 stage pressure hydraulics | | ○ | ○ |
| Spindle built-in stop block | | ☆ | ☆ |
| C-axis control Spindle box (0.001") | | ● | ● |
| Chuck clamp/release confirmation device | | ○ | ○ |
| 2 stage chuck foot switch | | ○ | ○ |
| Turret | | | |
| Tool holder | | ● | ● |
| Milling cutter tower | BMT | ● | ● |
| Straight milling head | Chuck type, 1ea | ● | ● |
| Angle milling head (radial) | Chuck type, 1ea | ● | ● |
| Straight milling head | Adapter type | ○ | ○ |
| Angle milling head (radial) | Adapter type | ○ | ○ |
| Reducing sleeve | | ● | ● |
| Sleeve | | - | - |
| U Drill tool base | | ● | ● |
| U drill sleeve | | ● | ● |
| U Drill end cover | | ○ | ○ |
| OD extension tool holder | For outside diameter | - | - |
| Angle head | | ☆ | ☆ |
| Tail seat & center cage | | | |
| Sleeve type tailstock | MT#4 | ● | ● |
| | MT#5 | ○ | ○ |
| Built-in tailstock | | ○ | ○ |
| Programmable tail seat | | ○ | ○ |
| Manual hydraulic center frame | | - | - |
| Standard live center (tail seat: standard) | | ● | ● |
| High precision live center | | - | - |
| Sleeve forward/backward confirmation device | | ○ | ○ |
| Tail seat foot switch | | ○ | ○ |
| Cooling unit & blowing unit | | | |
| Standard cooling unit | | ● | ● |
| Coolant above chuck | | ○ | ○ |
| Coolant gun | | ○ | ○ |
| Spindle center outlet (for special chucks only) | | ☆ | ☆ |
| Power tool center water | | ○ | ○ |
| Air blowing device above chuck | | ○ | ○ |
| Tailstock blow (top) | | ○ | ○ |
| Turret blows | | ☆ | ☆ |
| Air gun | | ○ | ○ |
| Spindle center air blower (for special chucks only) | | ☆ | ☆ |
| Standard coolant | 0.4Bar | ● | ● |
| | 6Bar | ○ | ○ |
| High pressure coolant | 20Bar | ○ | ○ |
| | 0.4Bar | ○ | ○ |
| Bed rinse coolant (only for rear chip extractor) | | ○ | ○ |
| Powerful cooling system (for auto operation) | | ☆ | ☆ |
| Coolant unit (auxiliary water tank for chip remover) | | ☆ | ☆ |
| Chip removal | | | |
| Cutting fluid tank / coolant tank | Side | ● | ● |
| | Rear | ○ | ○ |
| | Side(20bar) | ○ | ○ |
| | Rear(20bar) | ○ | ○ |
| Chip enclosure (Tank location/chip handling) | Front (right side discharge) | ○ | ○ |
| | Rear (rear discharge) | ○ | ○ |
| Special chip extractor | | ☆ | ☆ |

| | | | |
|---|--|-----------|---------|
| Chip cart | ST (180 ℓ) | ○ | ○ |
| | REVERSE (200 ℓ) | ○ | ○ |
| | LAGER REVERSE (370 ℓ) | ○ | ○ |
| | LAGER (470 ℓ) | ○ | ○ |
| | Custom | ☆ | ☆ |
| Safety device | | GHT220M | GHT260M |
| Full protection | | ● | ● |
| Electrical device | | | |
| Monochrome warning light | 1color : ■ | ● | ● |
| 3 color light with buzzer | 3color : ■ ■ ■ B | ○ | ○ |
| Electric cabinet lighting | | ○ | ○ |
| Portable hand wheel | | ☆ | ☆ |
| Counter | digit | ○ | ○ |
| TOTAL COUNTER | | digit | ○ |
| Tool counter | digit | ○ | ○ |
| Compound tool counter | digit | ○ | ○ |
| Leakage protection device | | ○ | ○ |
| AVR (Automatic Voltage Regulator) | | ☆ | ☆ |
| Transformer | 25kVA | ○ | ○ |
| (Auto Power Off) | | ○ | ○ |
| Measurement | | | |
| Manual fast knife setting instrument | | ○ | ○ |
| Automatic Fast Tool Setting Instrument (Renishaw) | | ○ | ○ |
| Airtight testing device (For special chucks only) | SMC | ○ | ○ |
| Auto measuring device | OLP40 | ○ | ○ |
| Linear grating ruler | X | ○ | ○ |
| | Z | ○ | ○ |
| Coolant detection (for chip extractor, float type only) | | ☆ | ☆ |
| Thermal deformation compensation | | 4 Channel | ○ |
| Environmental | | | |
| Electric cabinet air conditioning | | ○ | ○ |
| Oil mist collector | | ○ | ○ |
| Oil-water separator | | ○ | ○ |
| MQL (Micro-lubrication) | | ☆ | ☆ |
| Fixtures and automation devices | | | |
| Auto door | | ○ | ○ |
| Automatic shutter (for automated systems only) | | ○ | ○ |
| Secondary operation panel | | ☆ | ☆ |
| Bar conveyor interface | | ○ | ○ |
| Bar conveyor | | ☆ | ☆ |
| Work ejector device | | ☆ | ☆ |
| Extra M-code 4ea | | ○ | ○ |
| Automation Interface | | ☆ | ☆ |
| I/O module expansion (in /out) | 24/16 | ○ | ○ |
| Feeder | | Spindle | ○ |
| Turret push device (automatic) | | ☆ | ☆ |
| Discharge transfer (spindle side adapter required) | | ☆ | ☆ |
| Front simple automation | | ☆ | ☆ |
| Hydraulic device | | | |
| Standard hydraulic cylinder | Hollow | ● | ● |
| Standard hydraulic unit | 35bar/13 ℓ | ● | ● |
| Software | | | |
| Instruction (HW-MCG) | | ○ | ○ |
| Energy Saving System (HW-ESS) | | ○ | ○ |
| Tool monitoring (HW-TM) | | ○ | ○ |
| DNC software (HW-eDNC) | | ○ | ○ |
| Machine Tool Monitoring System (HW-MMS) | | ○ | ○ |
| Interactive Program (HW-DPRO) | | ○ | ○ |
| Other | | | |
| Adjust tools and toolboxes | | ● | ● |
| Custom Colors | Munsel NO. | ☆ | ☆ |
| CAD&CAM software | | ☆ | ☆ |



◆ When high pressure coolants above 6bar are used, a 4-channel thermal deformation compensation device is recommended for high quality product processing. Performance parameters are subject to change without notice.

Technical Specifications

Standard & Optional

● : Standard ○ : Optional ☆ : Consult - : N/A

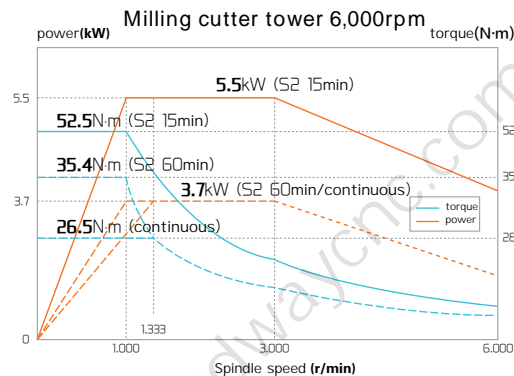
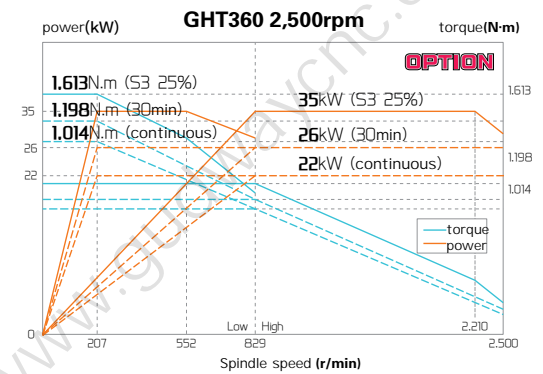
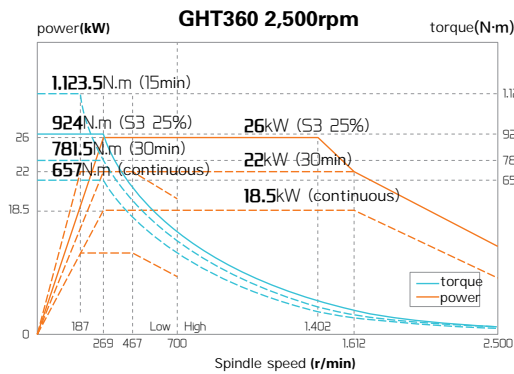
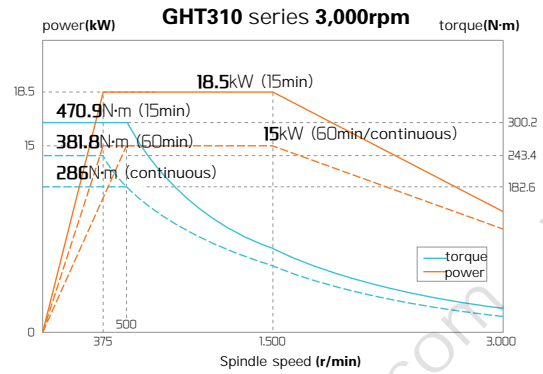
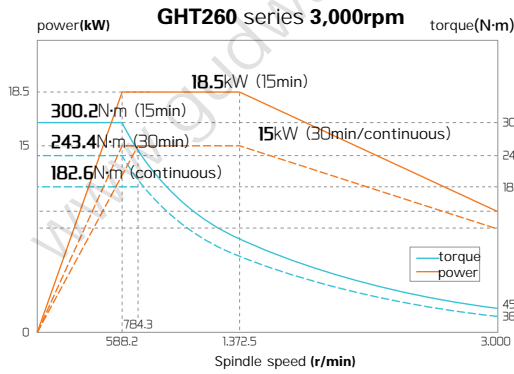
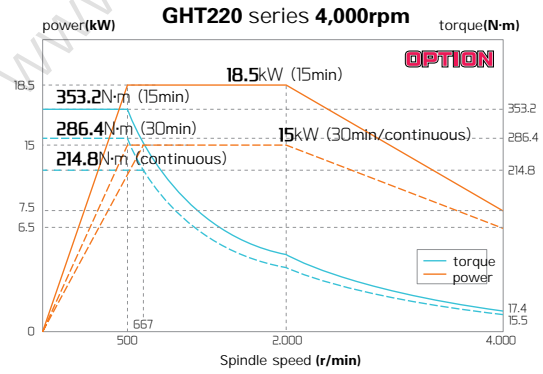
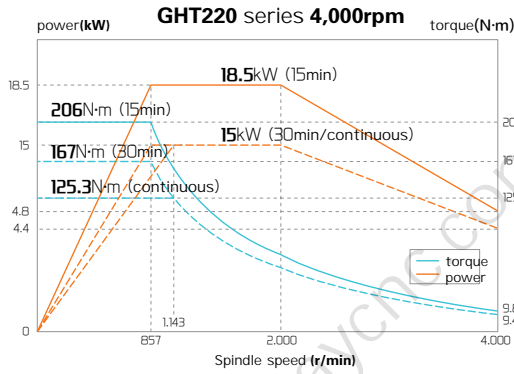
| Spindle | | GHT310 | GHT310M | GHT360 |
|--|------------------------------|--------|---------|--------|
| Spindle hollow chuck 3 jaw | 10° | - | - | - |
| | 12° | ● | ● | - |
| | 15° | ☆ | ☆ | ● |
| | 18° | - | - | ☆ |
| Standard soft claw (set) | | ● | ● | ● |
| High torque spindle (353 Nm) | | - | - | - |
| Chuck clamp foot switch | | ● | ● | ● |
| 2 stage pressure hydraulics | | ○ | ○ | ○ |
| Spindle built-in quasi-stop block | | ☆ | ☆ | ☆ |
| C-axis control headstock (0.001)* | | - | ● | - |
| Chuck clamp/release confirmation device | | ○ | ○ | ○ |
| 2 stage chuck foot switch | | ○ | ○ | ○ |
| Turret | | | | |
| Holder | | ● | ● | ● |
| Milling cutter tower | BMT | - | ● | - |
| Straight milling head | Chuck type, 1ea | - | ● | - |
| Angle milling head (radial) | Chuck type, 1ea | - | ● | - |
| Straight milling head | Adapter type | - | ○ | - |
| Angle milling head (radial) | Adapter type | - | ○ | - |
| Reduction sleeve | | ● | ● | ● |
| Sleeve | | ● | - | ● |
| U Drill tool base | | ● | ● | ● |
| U drill sleeve | | ● | ● | ● |
| U Drill end cover | | ○ | ○ | ○ |
| OD extension tool holder | For outside diameter | ● | - | ● |
| Angle head | | - | ☆ | - |
| Tail seat & center cage | | | | |
| Sleeve type tailstock | MT#4 | - | - | - |
| | MT#5 | ● | ● | ● |
| Programmable tail seat | | ○ | ○ | ○ |
| Manual hydraulic center frame | | - | - | - |
| Standard live center (tail seat: standard) | | ● | ● | ● |
| High precision live center | | - | - | - |
| Sleeve forward/backward confirmation device | | ○ | ○ | ○ |
| Tail seat foot switch | | ○ | ○ | ○ |
| Cooling unit & blowing unit | | | | |
| Standard cooling unit | | ● | ● | ● |
| Coolant above chuck | | ○ | ○ | ○ |
| Coolant gun | | ○ | ○ | ○ |
| Spindle center outlet (for special chucks only) | | ☆ | ☆ | ☆ |
| Power tool center water | | - | ○ | - |
| Air blowing device above chuck | | ○ | ○ | ○ |
| Tailstock blow (top) | | ○ | ○ | ○ |
| Turret blow | | ☆ | ☆ | ☆ |
| Air gun | | ○ | ○ | ○ |
| Spindle center air blower (for special chucks only) | | ☆ | ☆ | ☆ |
| Standard coolant | | ● | ● | ● |
| High pressure coolant | 6Bar | ○ | ○ | ○ |
| | 20Bar | ○ | ○ | ○ |
| Bed rinse coolant (only for rear chip extractor) | 0.4Bar | ○ | ○ | ○ |
| | 6Bar | ○ | ○ | ○ |
| Powerful cooling system (for auto operation) | | ☆ | ☆ | ☆ |
| Coolant unit (auxiliary water tank for chip remover) | | ☆ | ☆ | ☆ |
| Chip removal | | | | |
| Cutting fluid tank or coolant tank | Side | ● | ● | ● |
| | Rear | ○ | ○ | ○ |
| | Side (20bar) | ○ | ○ | ○ |
| | Rear (20bar) | ○ | ○ | - |
| chip cleaner (Tank location/chip handling) | Front (right side discharge) | ○ | ○ | ○ |
| | Rear (rear discharge) | ○ | ○ | ○ |
| Special chip extractor | | ☆ | ☆ | ☆ |
| Chip cart | Standard | ○ | ○ | ○ |
| | Reverse | ○ | ○ | ○ |
| | Plus reverse | ○ | ○ | ○ |
| | Extra large size | ○ | ○ | ○ |
| | Custom | ☆ | ☆ | ☆ |

| Safety device | | GHT310 | GHT310M | GHT360 |
|---|--|--------|---------|--------|
| Full protection | | ● | ● | ● |
| Electrical device | | | | |
| Monochrome warning light | 1color :  | ● | ● | ● |
| 3 color light with buzzer | 3color :  B | ○ | ○ | ○ |
| Electric cabinet lighting | | ○ | ○ | ○ |
| Portable hand wheel | | ☆ | ☆ | ☆ |
| Counter | digit | ○ | ○ | ○ |
| TOTAL COUNTER | | ○ | ○ | ○ |
| Tool counter | digit | ○ | ○ | ○ |
| Compound tool counter | | ○ | ○ | ○ |
| Leakage protection device | | ○ | ○ | ○ |
| AVR (Automatic Voltage Regulator) | | ☆ | ☆ | ☆ |
| Transformer | 30kVA | ○ | ○ | ○ |
| (Auto Power Off) | | ○ | ○ | ○ |
| Measurement | | | | |
| Automatic Fast Tool Setting Instrument (Renishaw) | | ○ | ○ | ○ |
| Airtight testing device (For special chucks only) | SMC | ○ | ○ | ○ |
| | | | | |
| Auto measuring device | OLP40 | ○ | ○ | ○ |
| Linear grating ruler | X | ○ | ○ | ○ |
| | Z | ○ | ○ | ○ |
| Coolant detection (for chip extractor, float type only) | | ☆ | ☆ | ☆ |
| Thermal deformation compensation | | ○ | ○ | ○ |
| Environment | | | | |
| Electric cabinet air conditioning | | ○ | ○ | ○ |
| Oil mist collector | | ○ | ○ | ○ |
| Oil-water separator | | ○ | ○ | ○ |
| MQL (Micro-lubrication) | | ☆ | ☆ | ☆ |
| Fixtures and automation devices | | | | |
| Auto door | | ○ | ○ | ○ |
| Automatic shutter (for automated systems only) | | ○ | ○ | ○ |
| Secondary operation panel | | ☆ | ☆ | ☆ |
| Bar conveyor interface | | ○ | ○ | ○ |
| Bar conveyor | | ☆ | ☆ | ☆ |
| Work ejector device | | ☆ | ☆ | ☆ |
| Extra M-code 4ea | | ○ | ○ | ○ |
| Automation interface | | | | |
| I/O module expansion (in/out) | 24/16点 | ○ | ○ | ○ |
| Feeder | | ○ | ○ | ○ |
| Turret push device (automatic) | | ☆ | ☆ | ☆ |
| Discharge transfer (spindle side adapter required) | | ☆ | ☆ | ☆ |
| Front simple automation | | ☆ | ☆ | ☆ |
| Hydraulic device | | | | |
| Standard hydraulic cylinder | Hollow | ● | ● | ● |
| Standard hydraulic unit | 35bar/13 ℓ | ● | ● | ● |
| Software | | | | |
| Instruction (HW-MCG) | | ○ | ○ | ○ |
| Energy Saving System (HW-ESS) | | ○ | ○ | ○ |
| Tool monitoring (HW-TM) | | ○ | ○ | ○ |
| DNC software (HW-eDNC) | | ○ | ○ | ○ |
| Machine Tool Monitoring System (HW-MMS) | | ○ | ○ | ○ |
| Interactive Program (HW-DPRO) | | ○ | ○ | ○ |
| Other | | | | |
| Adjust tools and toolboxes | | ● | ● | ● |
| Custom Colors | Munsel NO. | ☆ | ☆ | ☆ |
| CAD&CAM software | | ☆ | ☆ | ☆ |

◆ When high pressure coolants above 6bar are used, a 4-channel thermal deformation compensation device is recommended for high quality product processing.

Performance parameters are subject to change without notice.

Spindle motor power/torque diagram

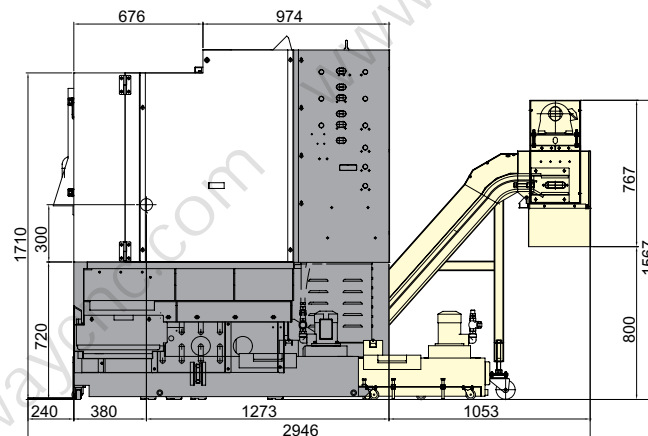
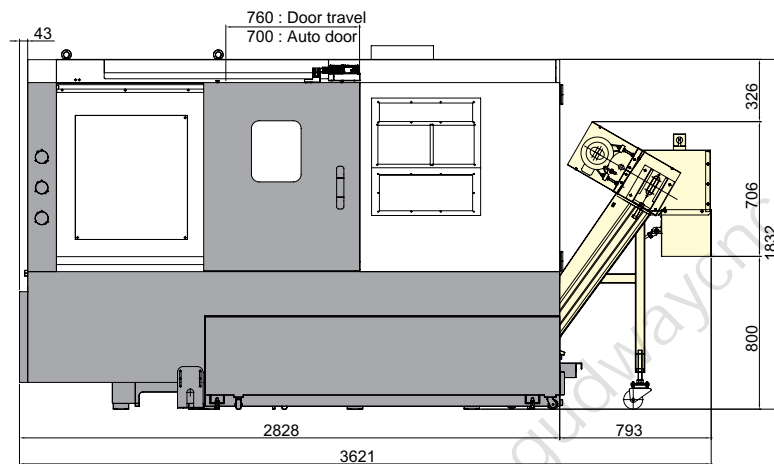
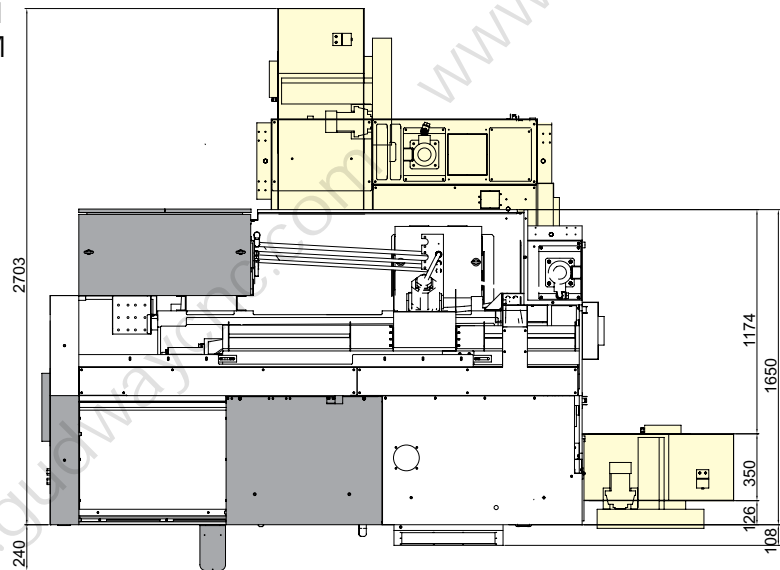


Technical Specifications

Size

UNIT : mm

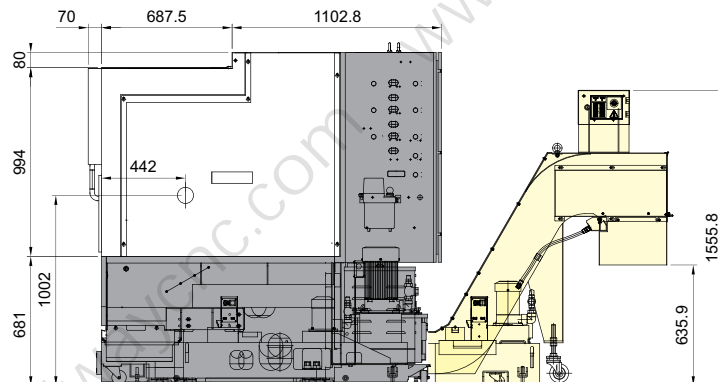
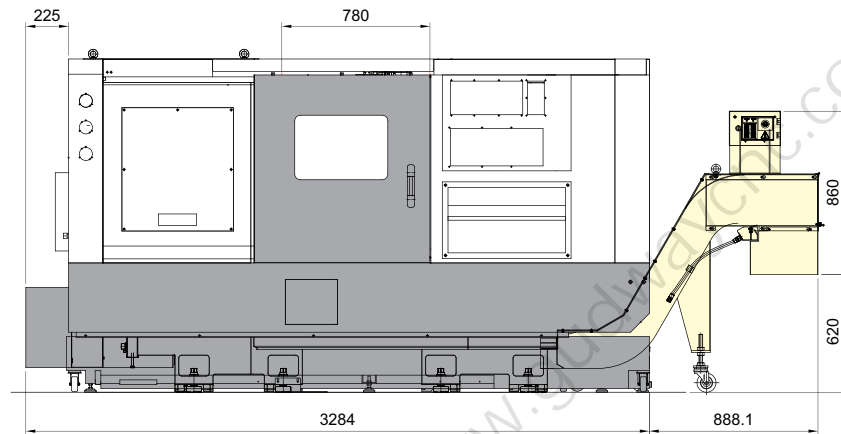
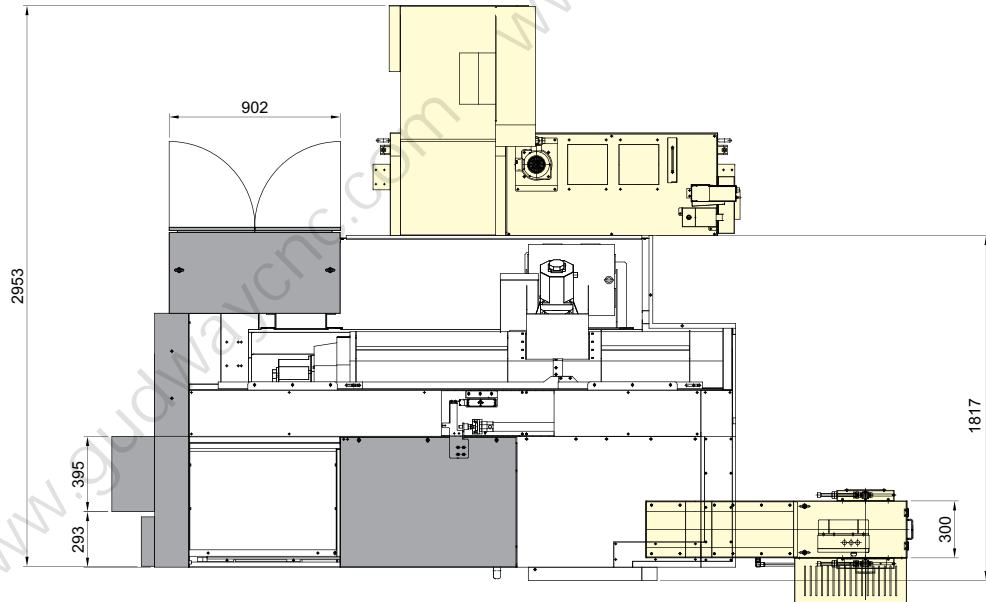
GHT220/220M
GHT260/260M



Size

UNIT : mm

GHT310/310M



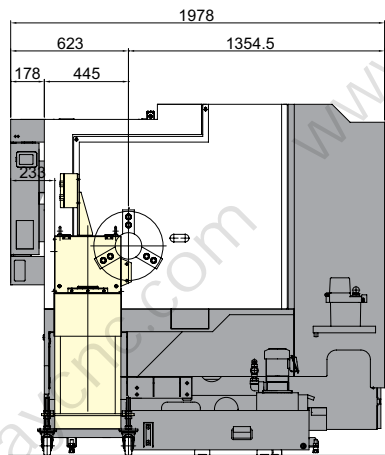
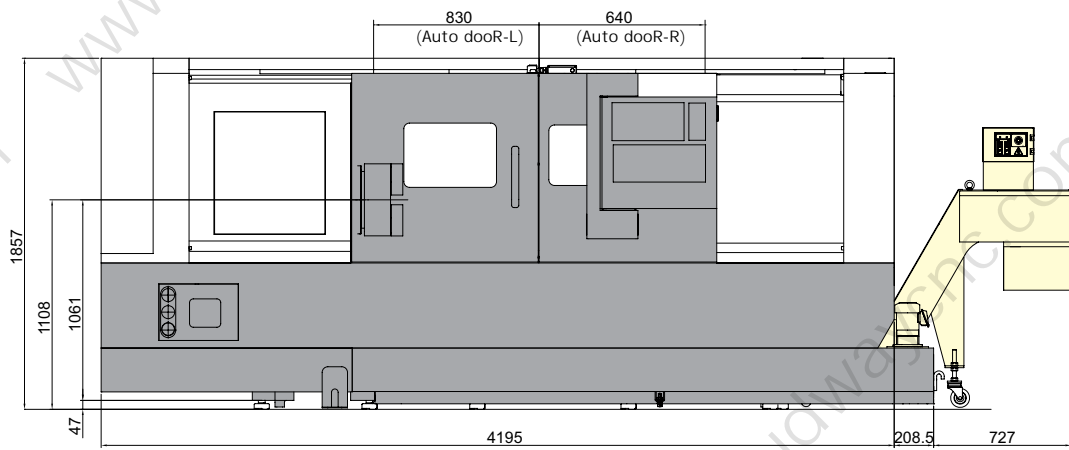
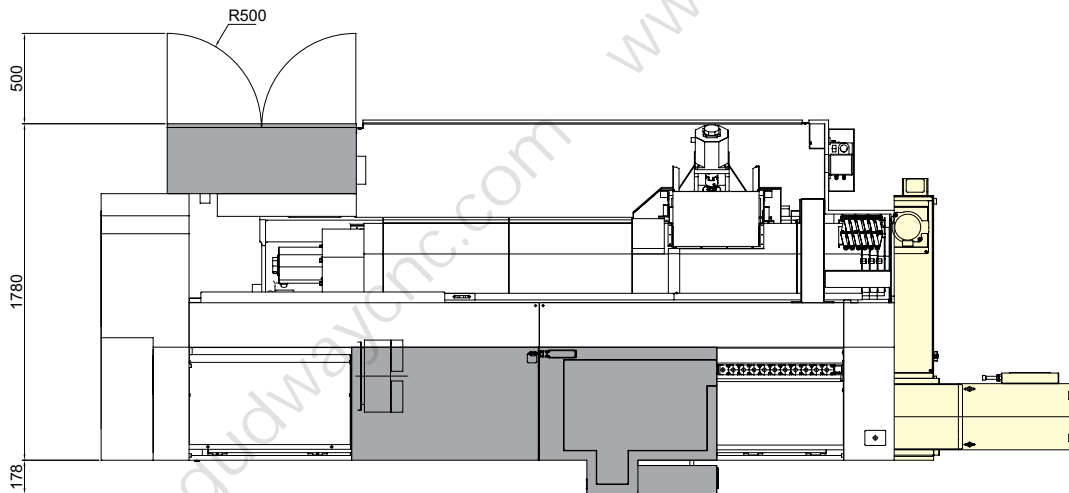
Performance parameters are subject to change without notice.

Technical Specifications

Size

UNIT: mm

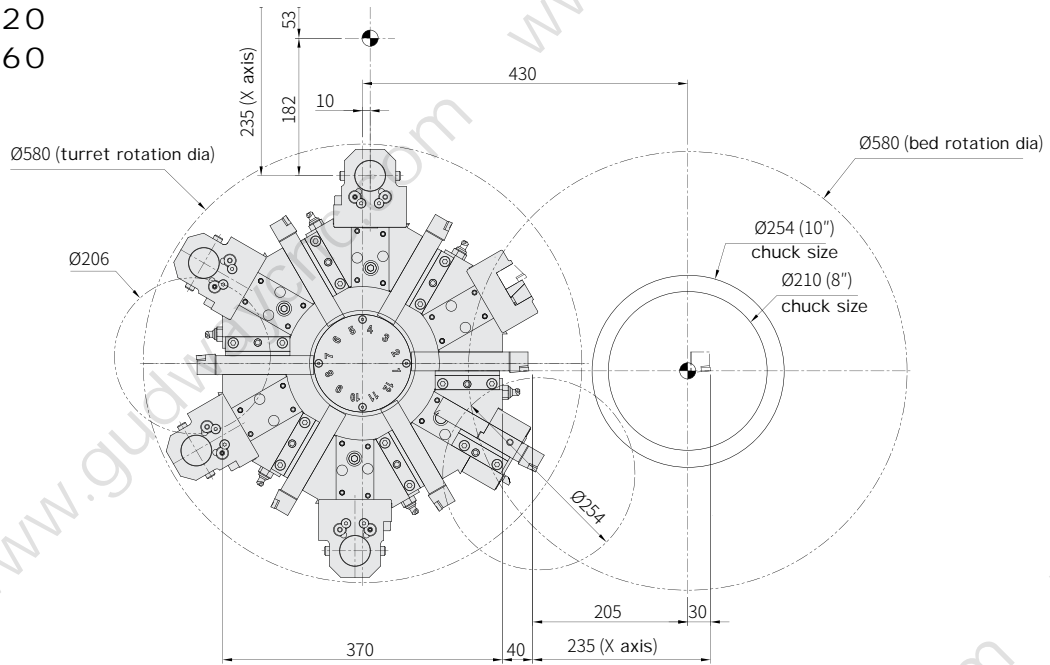
GHT360



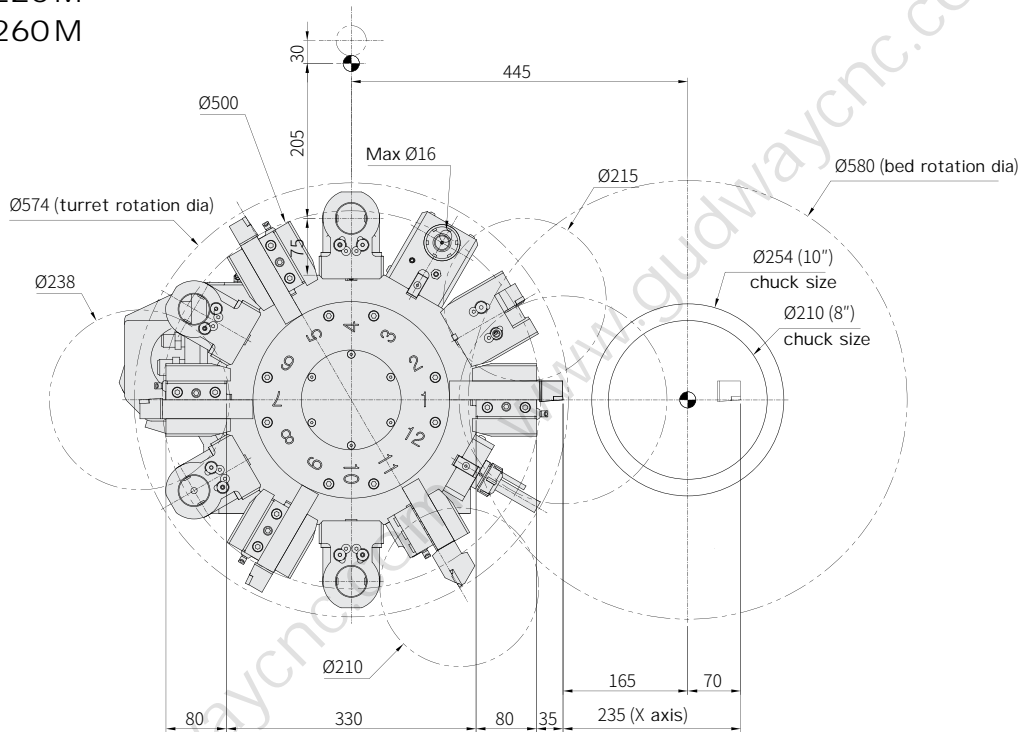
Tool interferogram

UNIT : mm

GHT220
GHT260



GHT220M
GHT260M



When the position of the tool holder is changed arbitrarily, the content of the interference shown in the figure above will change.

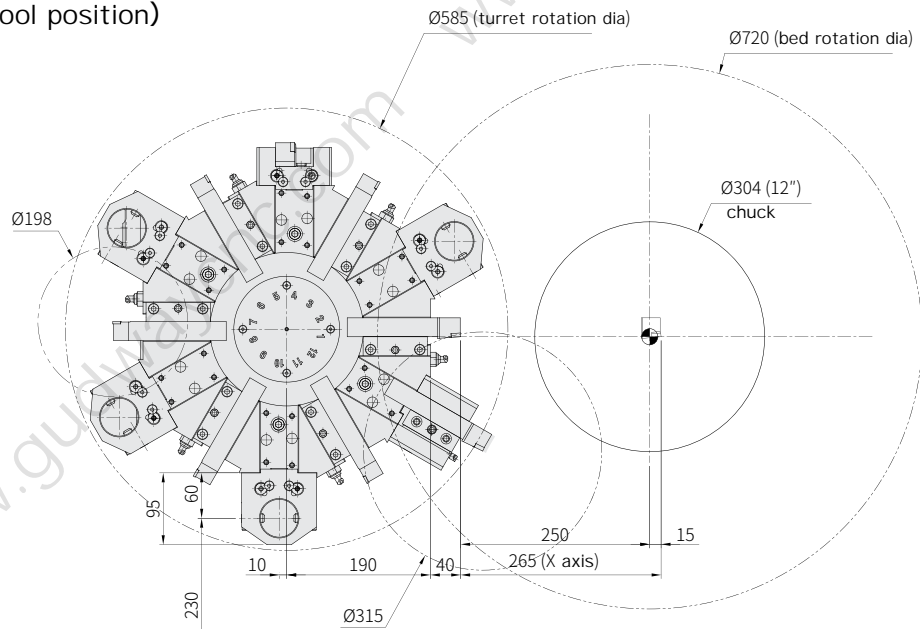
Performance parameters are subject to change without notice.

Technical Specifications

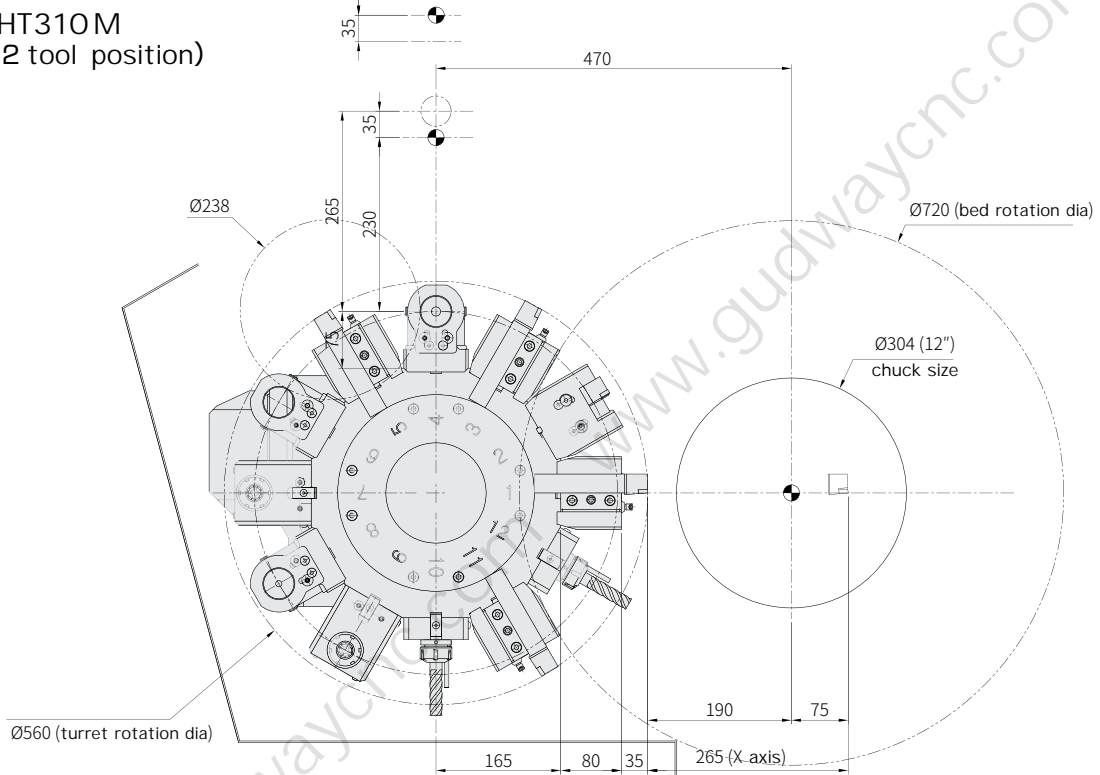
Tool interferogram

UNIT: mm

GHT310 (12 tool position)



GHT310M (12 tool position)



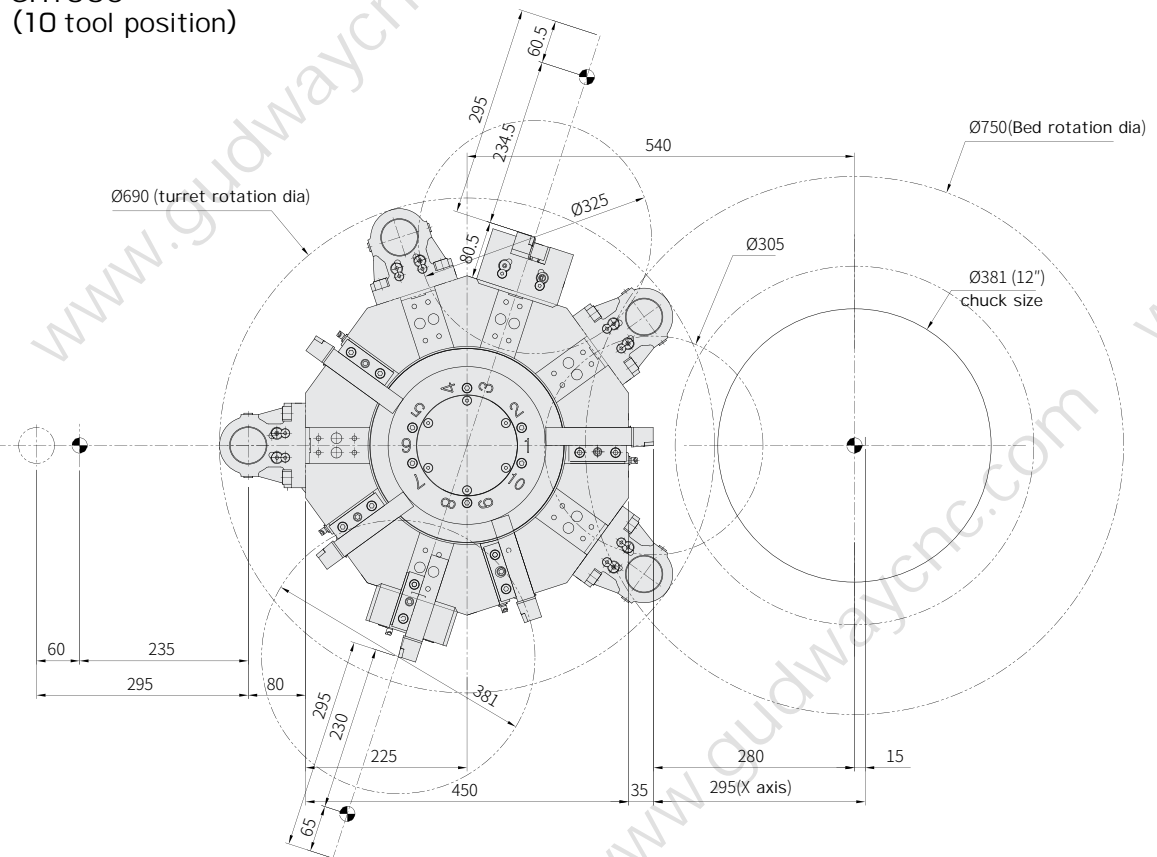
When the position of the tool holder is changed arbitrarily, the content of the interference shown in the figure above will change.

Performance parameters are subject to change without notice.

Tool interferogram

UNIT : mm

GHT360
(10 tool position)



When the position of the tool holder is changed arbitrarily, the content of the interference shown in the figure above will change.

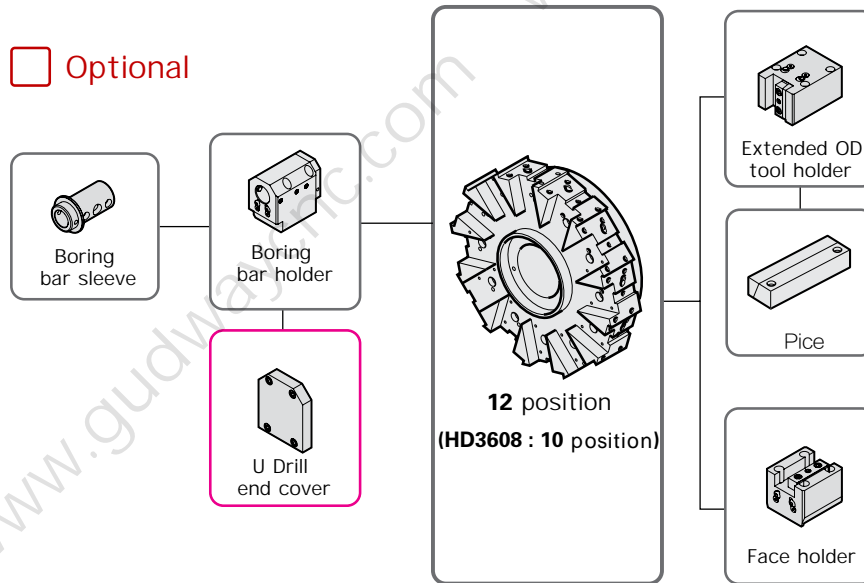
Performance parameters are subject to change without notice.

Technical Specifications

Tool system

UNIT : mm

Optional

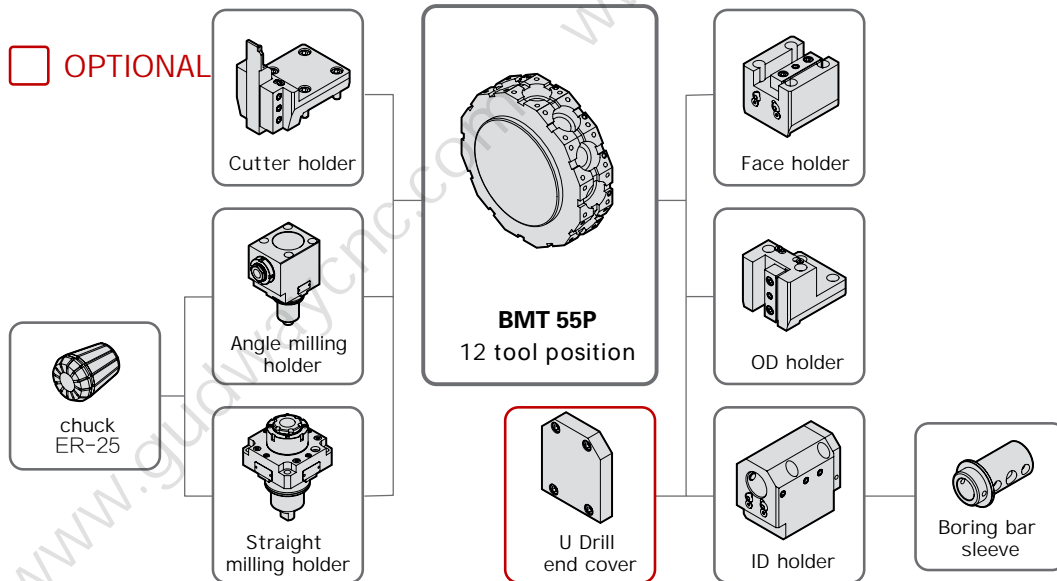


Tool details

| Item | | | GHT220/260 | GHT310/360 |
|---------------------|--------------------------------|---------------|------------|------------|
| Turning tool holder | OD holder | Lengthen | 1 | 1 |
| | Transverse tool holder | | 1 | 1 |
| Boring tool holder | ID tool holder | Ø40 (Ø1 1/2") | 4 | 4 |
| | U Drill tool holder | END BRACKET | Optional | Optional |
| Driven tool holder | Straight milling cutter holder | Standard | - | - |
| | | TTC | - | - |
| | Angle cutter seat (radial) | Standard | - | - |
| | | TTC | - | - |
| Sleeve | Boring | Ø10 (Ø3/8") | 1 | - |
| | | Ø12 (Ø1/2") | 1 | - |
| | | Ø16 (Ø5/8") | 1 | 1 |
| | | Ø20 (Ø3/4") | 1 | 1 |
| | | Ø25 (Ø1") | 1 | 1 |
| | | Ø32 (Ø1 1/4") | 1 | 1 |
| | | Ø40 (Ø1 1/2") | - | 1 |
| | Drill | MT 1 x MT 2 | 1 | 1 |
| | | MT 2 | 1 | 1 |
| | ER chuck | | - | - |

Tool system

UNIT : mm



Tool details

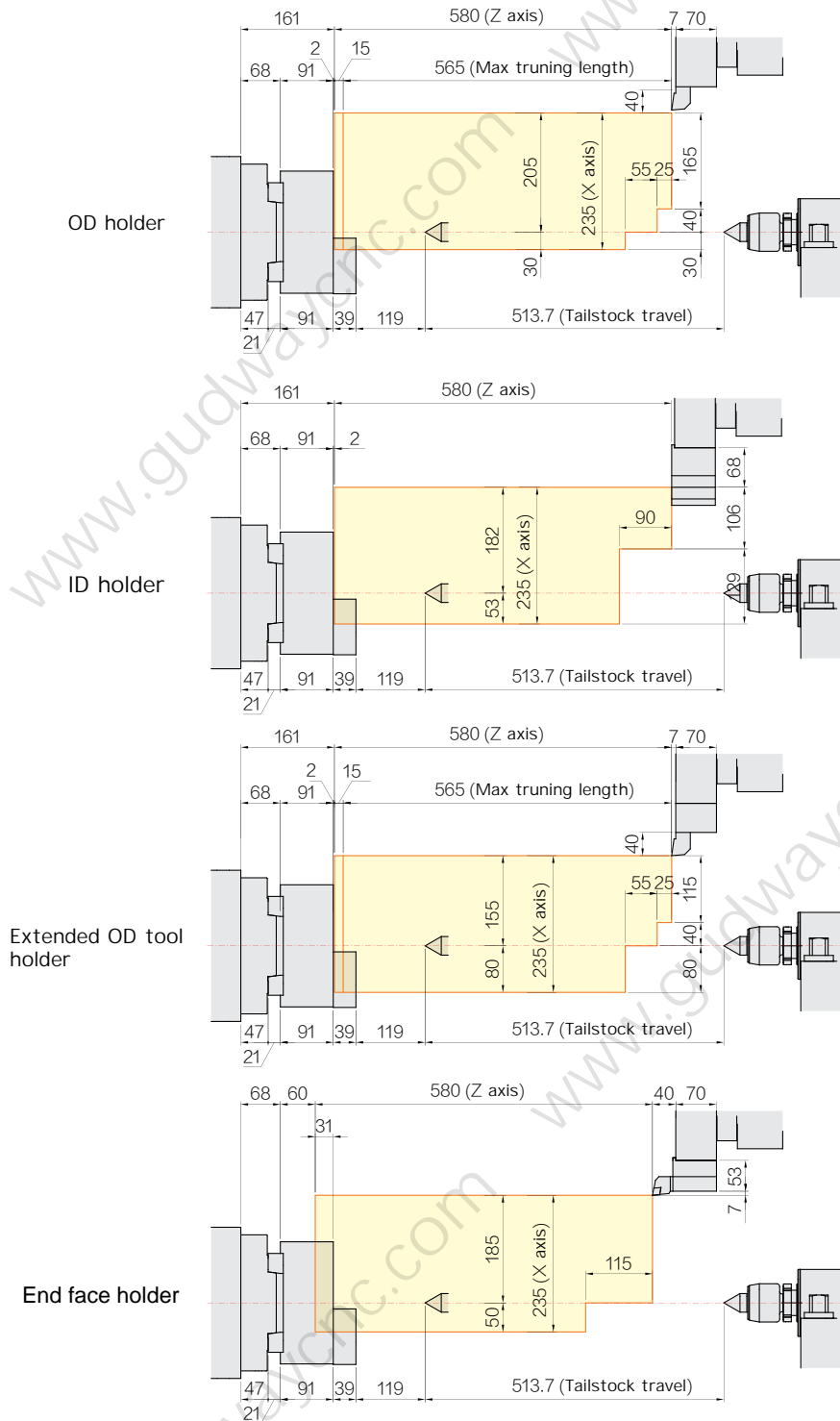
| Item | | | GHT220M/260M | GHT310M |
|---------------------|--------------------------------|---------------|--------------|----------|
| Turning tool holder | OD holder | Right/Left | 4 | 3 |
| | Cutter seat | | 1 | 1 |
| | Transverse holder | | 1 | 1 |
| Boring holder | ID holder | Ø40 (Ø1 1/2") | 4 | 3 |
| | U drill tool holder | END BRACKET | Optional | Optional |
| Driven holder | Straight milling cutter holder | Standard | 1 | 2 |
| | | TTC | Optional | Optional |
| | Angle cutter seat (radial) | Standard | 1 | 2 |
| | | TTC | Optional | Optional |
| Sleeve | Boring | Ø10 (Ø3/8") | 1 | 1 |
| | | Ø12 (Ø1/2") | 1 | 1 |
| | | Ø16 (Ø5/8") | 1 | 1 |
| | | Ø20 (Ø3/4") | 1 | 1 |
| | | Ø25 (Ø1") | 1 | 1 |
| | | Ø32 (Ø1 1/4") | 1 | 1 |
| | Drill ER chuck | MT 1 x MT 2 | Optional | 1 |
| | | MT 2 | Optional | 1 |
| | | MT 3 | Optional | - |
| | | | | 1 set |

Technical Specifications

Tool interferogram

UNIT: mm

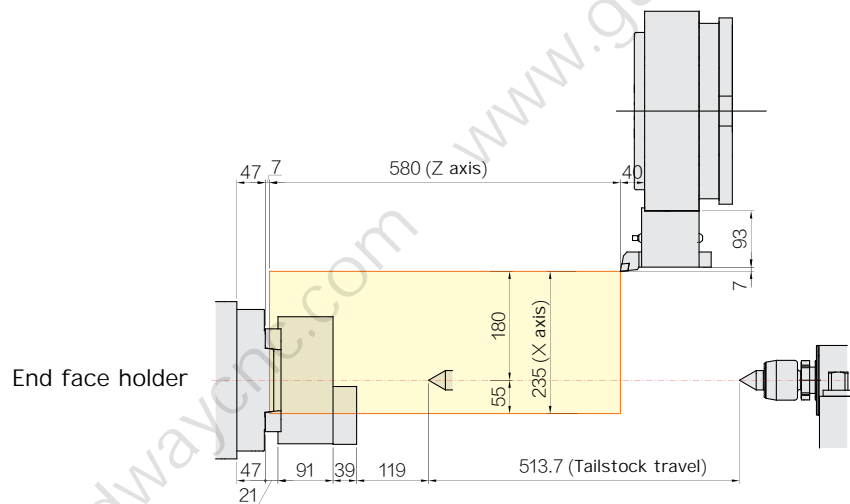
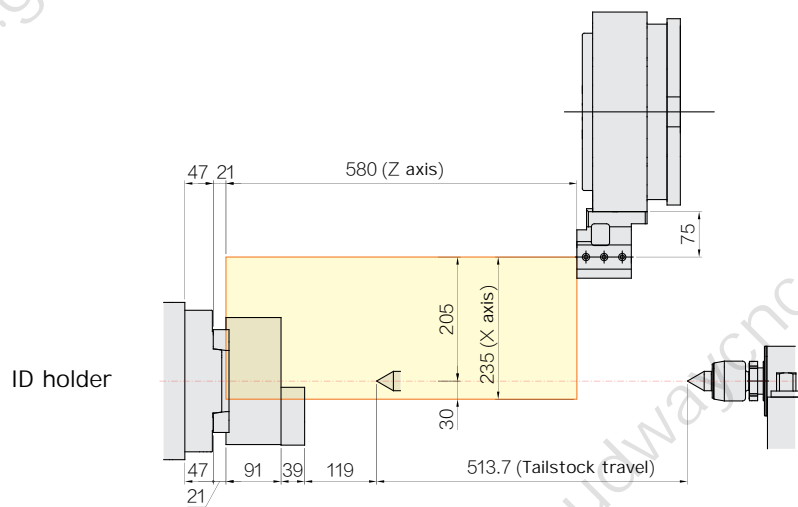
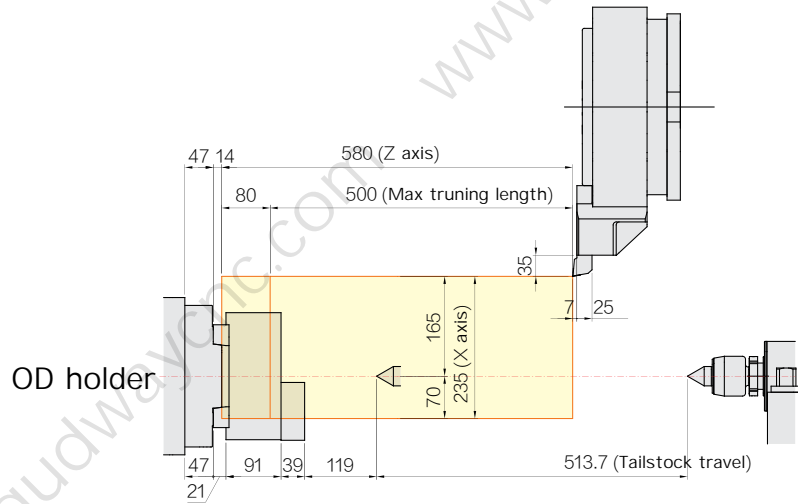
GHT220



Tool interferogram

UNIT: mm

GHT220M

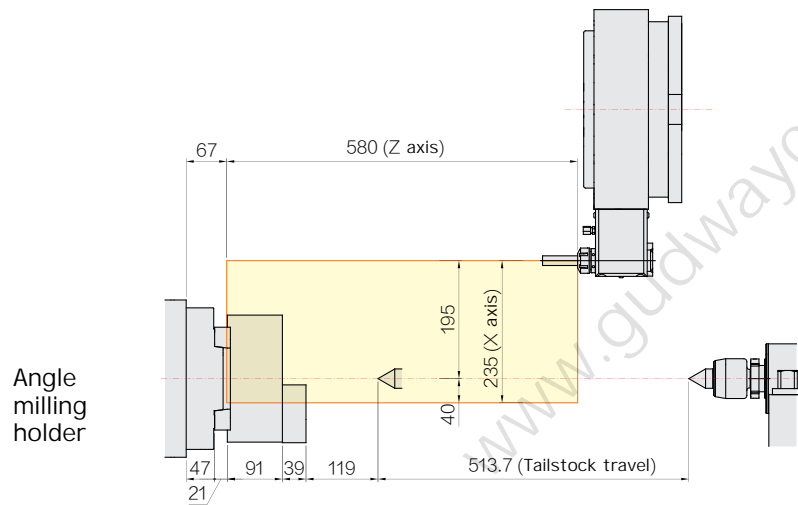
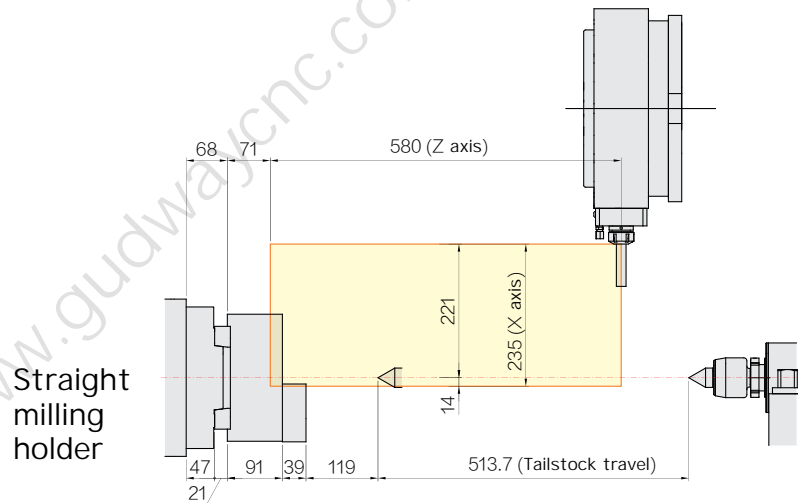


Technical Specifications

Tool interferogram

UNIT: mm

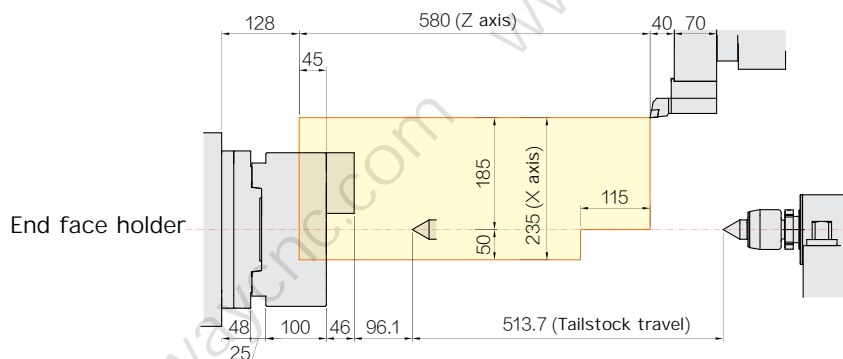
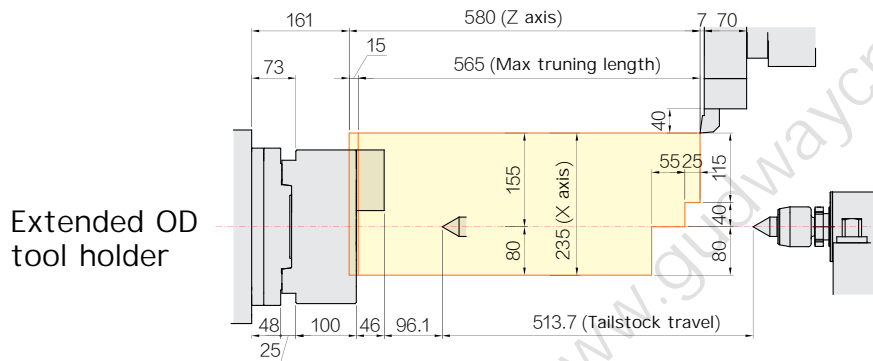
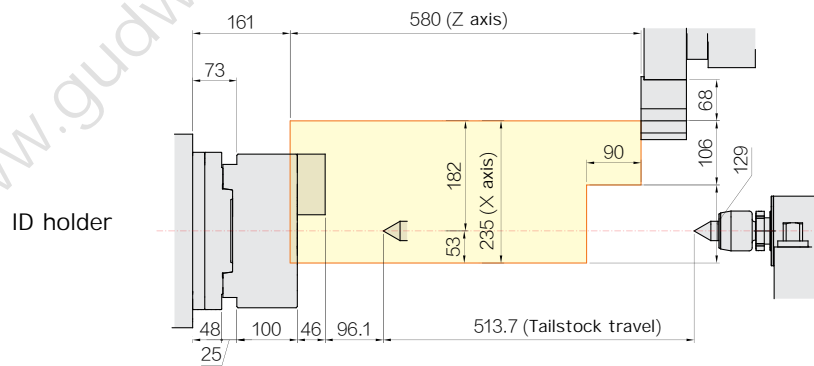
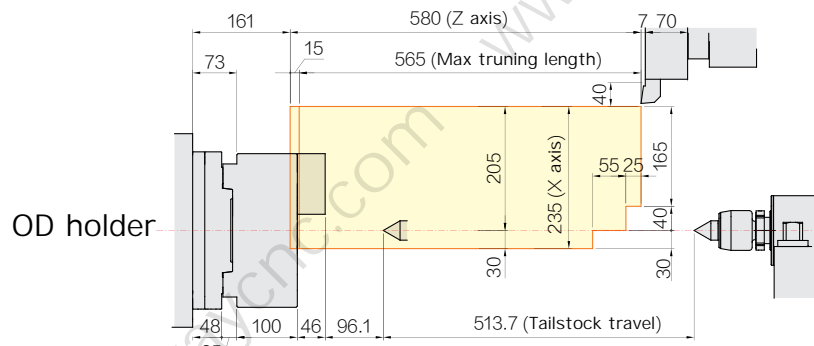
GHT220M



Tool interferogram

UNIT: mm

GHT260

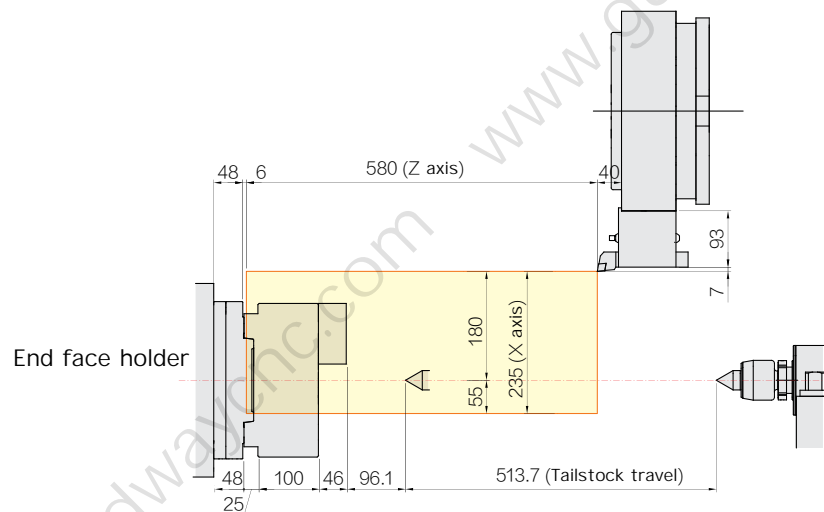
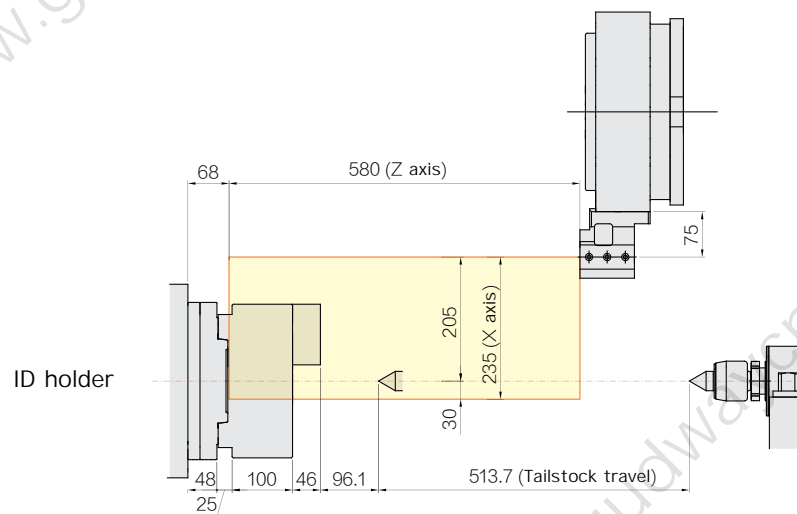
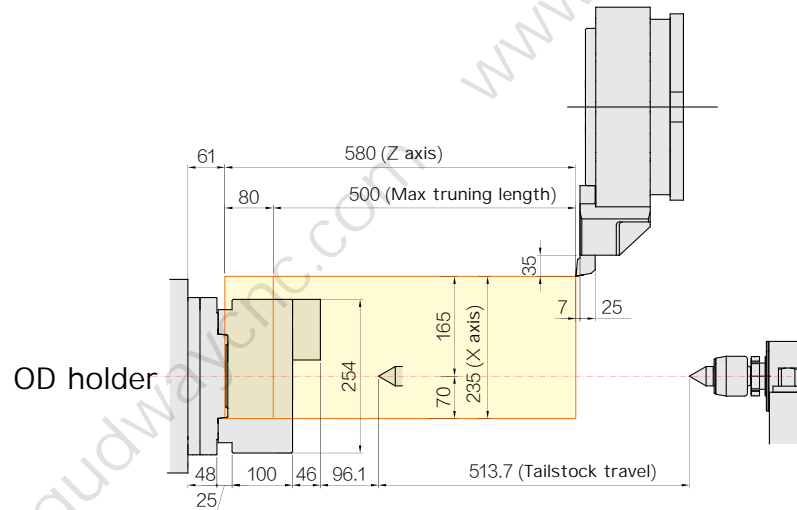


Technical Specifications

Tool interferogram

UNIT: mm

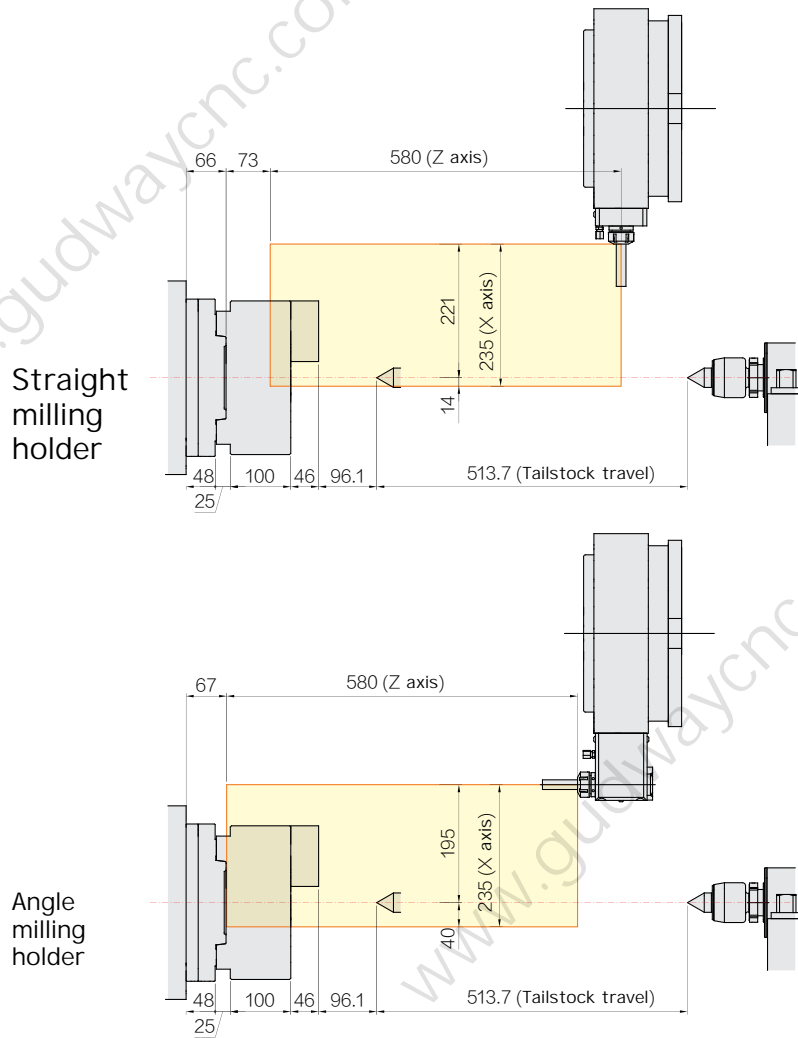
GHT260M



Tool interferogram

UNIT: mm

GHT260M

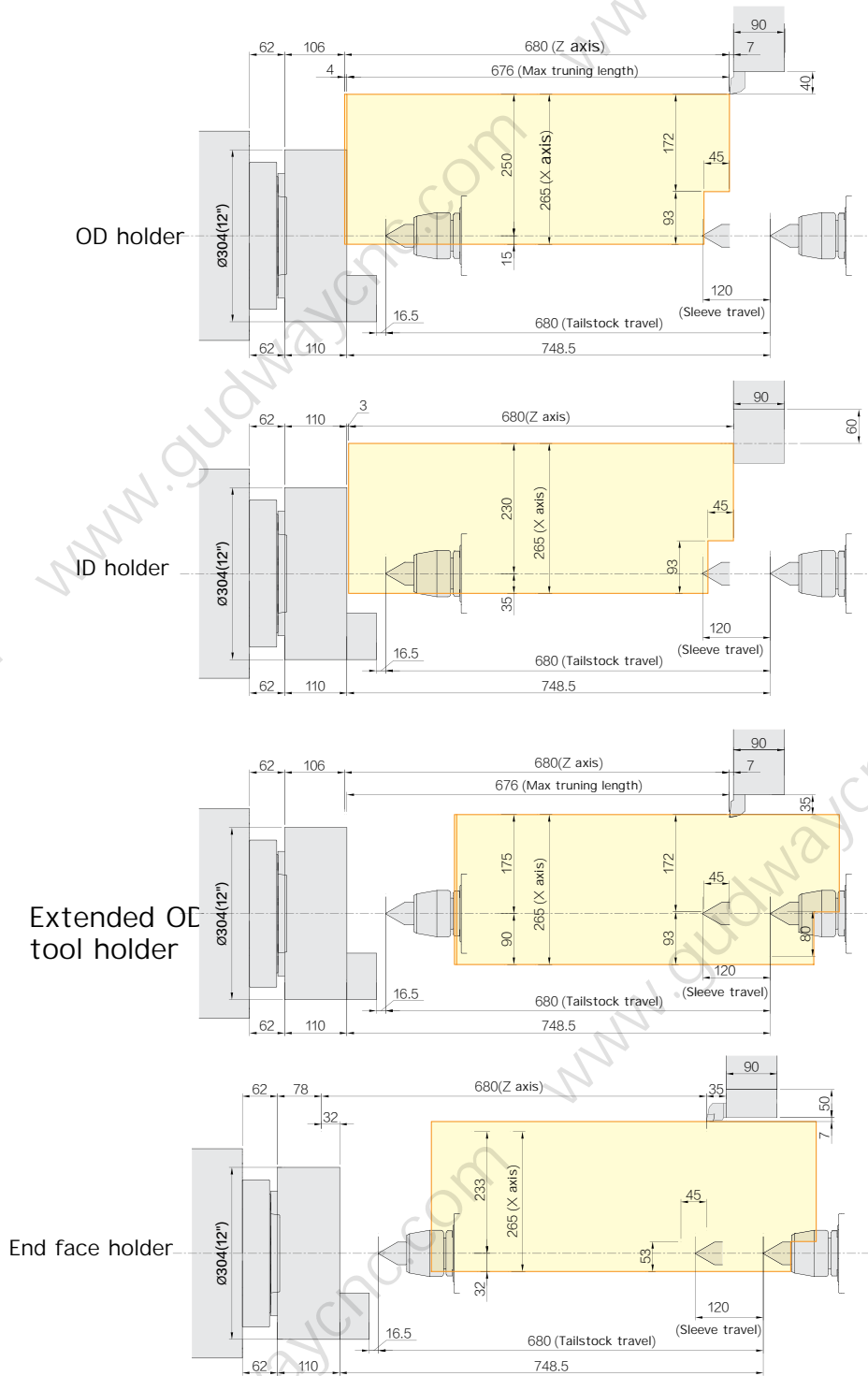


Technical Specifications

Tool interferogram

UNIT : mm

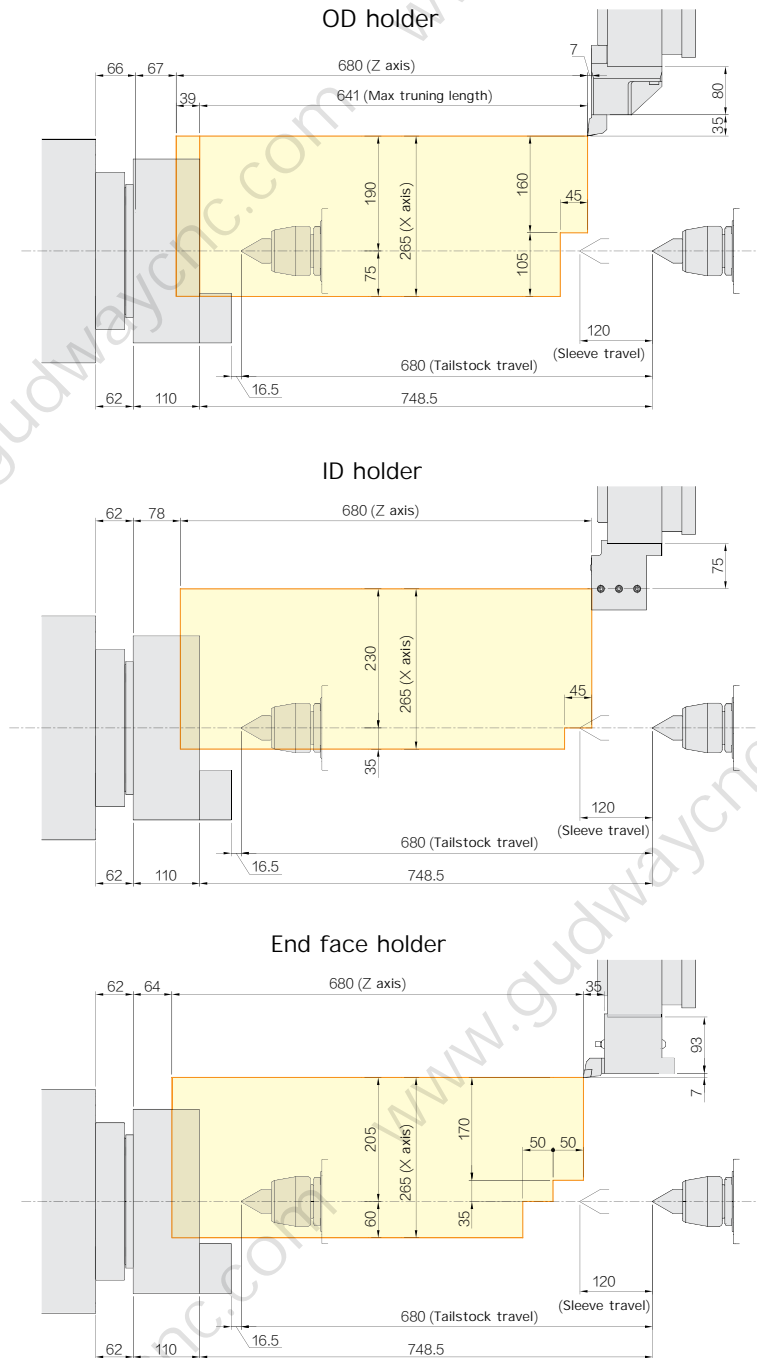
GHT310



Tool interferogram

UNIT : mm

GHT310M



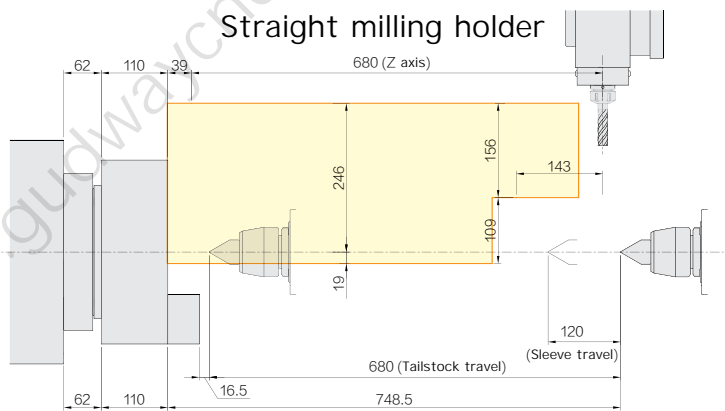
Technical Specifications

Tool interferogram

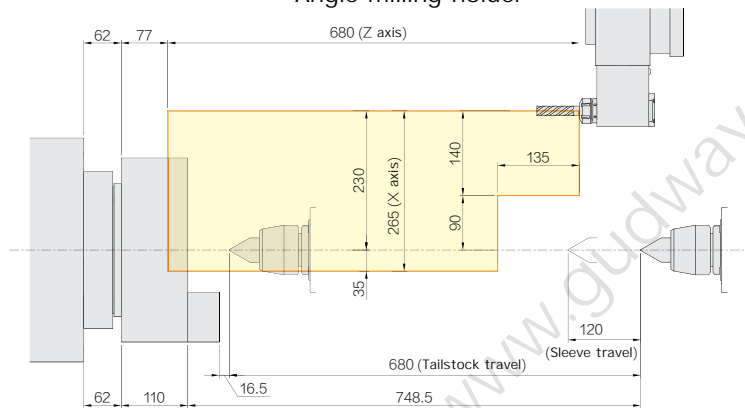
UNIT: mm

GHT310M

Straight milling holder



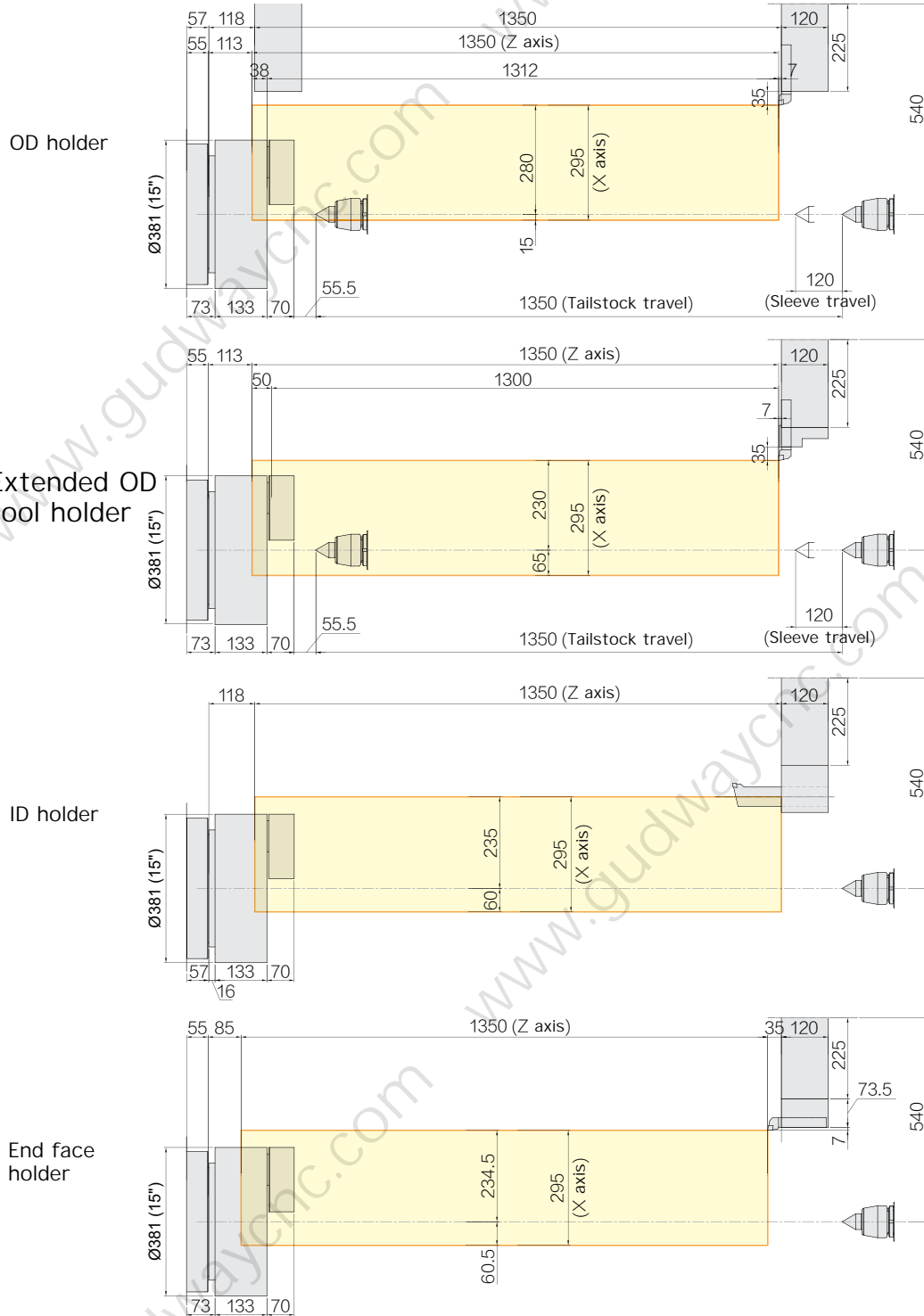
Angle milling holder



Tool interferogram

UNIT : mm

GHT360



Technical Specifications

Specifications

[] : High torque spindle

| ITEM | | GHT220 | GHT220M | |
|---------------------|------------------------------|----------|-------------------------|---------------|
| Machining | Max bed turning diameter | mm | Ø580 | |
| | Max. turning dia | mm | Ø420 | |
| | Max turning length | mm | 565 | |
| | Maximum bar diameter | mm | Ø65 | |
| Spindle | Chuck size | inch | 8" | |
| | Through diameter of spindle | mm | Ø76 | |
| | Spindle speed (rpm) | r/min | 4,000 [4,000] | |
| | Motor power (Max/continuous) | kW | 18.5/15 [18.5/15] | |
| | Torque (Max/continuous) | N.m | 206/125.3 [353.2/214.8] | |
| | Spindle form | - | Belt | |
| | Spindle nose | - | A2-6 | |
| | C-axis indexing | deg | - | 0.001° |
| Feed | Travel(X/Z) | mm | 235/580 | |
| | Fastfeed speed(X/Z) | m/min | 24/30 | |
| | Guide type | - | Hard rail | |
| Turret | Number of tools | ea | 12 | |
| | Tool dimension | OD | mm | □25 |
| | | ID | mm | Ø40 |
| | Indexing time (1-step) | sec/step | | 0.12 |
| Live Tool | Motor power (Max/continuous) | kW | - | 5.5/3.7 |
| | Power tool speed (rpm) | r/min | - | 6,000 |
| | Torque (Max/continuous) | N.m | - | 52.5/26.5 |
| | Chuck size | mm | - | Ø16(ER25) |
| | Model | - | - | BMT55 |
| Tailstock | Taper | - | | MT#4 |
| | Sleeve diameter | mm | | Ø65 |
| | Sleeve travel | mm | | 80 |
| | Stroke | mm | | 513.7 |
| Water tank capacity | Coolant tank | ℓ | | 150 |
| | Lubrication oil tank | ℓ | | 3 |
| Power supply | Power supply | kVA | | 25 |
| | Minimum cable diameter | Sq | | > 16 |
| | Voltage | V/Hz | | 220/50 |
| Machine size | Floor area (length × width) | mm | | 2,828 × 1,758 |
| | Height | mm | | 1,832 |
| | Weight | kg | 4,100 | 4,300 |
| CNC | CNC system | - | | FANUC i |

Specifications

[]: High torque spindle

| Item | | GHT260 | GHT260M | |
|---------------------|------------------------------|----------|-------------|---------------|
| Machining | Max bed turning diameter | mm | Ø580 | |
| | Max. turning dia | mm | Ø420 | |
| | Max turning length | mm | 565 | |
| | Max diameter of bar | mm | Ø76 | |
| Spindle | Chuck size | inch | 10" | |
| | Through diameter of spindle | mm | Ø92 | |
| | Spindle speed (rpm) | r/min | 3,000 | |
| | Motor power (Max/continuous) | kW | 18.5/15 | |
| | Torque (Max/continuous) | N.m | 300.2/182.6 | |
| | Spindle form | - | Belt | |
| | Spindle nose | - | A2-8 | |
| | C-axis indexing | deg | - | 0.001° |
| Feed | Travel(X/Z) | mm | 235/580 | |
| | Fast moving speed (X/Z) | m/min | 24/30 | |
| | Guide type | - | Belt | |
| Turret | Number of tool | ea | 12 | |
| | SIZE | OD | mm | □25 |
| | | ID | mm | Ø40 |
| | Indexing time (1-step) | sec/step | | 0.12 |
| Live tool | Motor power (Max/continuous) | kW | - | 5.5/3.7 |
| | Power tool speed (rpm) | r/min | - | 6,000 |
| | Torque (Max/continuous) | N.m | - | 52.5/26.5 |
| | Chuck size | mm | - | Ø16(ER25) |
| | Model | - | - | BMT55 |
| Tailstock | Taper | - | | MT#4 |
| | Sleeve diameter | mm | | Ø65 |
| | Sleeve travel | mm | | 80 |
| | Travel | mm | | 513.7 |
| Water tank capacity | Coolant tank | ℓ | | 150 |
| | Lubrication tank | ℓ | | 3 |
| Power supply | Power supply | kVA | | 25 |
| | Minimum cable diameter | Sq | | > 16 |
| | Voltage | V/Hz | | 220/50 |
| Machine | Floor area (length x width) | mm | | 2,828 × 1,758 |
| | Height | mm | | 1,832 |
| | Weight | kg | 4,200 | 4,400 |
| CNC | CNC SYSTEM | - | | FANUC i |

Technical Specifications

Specifications

[] : High torque spindle

| ITEM | | GHT310 | GHT310M | GHT360 | |
|---------------------|------------------------------|----------|---------------|-----------|---------------------------|
| Machining | Max bed turning diameter | mm | Ø720 | | |
| | Max. turning dia | mm | Ø475 | Ø380 | Ø560 |
| | Max. turning length | mm | 676 | 641 | 1,300 |
| | Maximum bar diameter | mm | Ø76 | | Ø102 |
| Spindle | Chuck size | inch | 12" | | 15" |
| | Through diameter of spindle | mm | Ø92 | | Ø115 |
| | Spindle speed (rpm) | r/min | 3,000 | | 2,500 [2,500] |
| | Motor power (Max/continuous) | kW | 18.5/15 | | 26/18.5 [35/22] |
| | Torque (Max/continuous) | N.m | 470.9/286 | | 1,123.5/657 [1,613/1,014] |
| | Spindle form | - | Belt | | Belt [gear] |
| | Spindle nose | - | A2-8 | | A2-11 |
| | C-axis indexing | deg | - | | - |
| Feed | Travel (X/Z) | mm | 265/680 | | 295/1,350 |
| | Fast feed(X/Z) | m/min | 24/30 | | - |
| | Guide type | - | Hard rail | | - |
| Turret | Number of tools | ea | 12 | | 10 |
| | Tool size | OD | mm | □25 | |
| | | ID | mm | Ø50 | |
| | Indexing time (1-step) | sec/step | 0.12 | | - |
| Live tool | Motor power (Max/continuous) | kW | - | 5.5/3.7 | - |
| | Power tool speed (rpm) | r/min | - | 6,000 | - |
| | Torque (Max/continuous) | N.m | - | 52.5/26.5 | - |
| | Chuck size | mm | - | Ø16(ER25) | - |
| | Model | - | - | BMT55 | - |
| Tailstock | Taper | - | MT#5 | | - |
| | Sleeve diameter | mm | Ø100 | | - |
| | Sleeve travel | mm | 120 | | - |
| | Travel | mm | 680 | | 1,350 |
| Water tank capacity | Coolant tank | ℓ | 180 | | 225 |
| | Lubrication oil tank | ℓ | 3 | | - |
| Power supply | Power supply | kVA | 30 | | - |
| | Minimum cable diameter | Sq | > 16 | | - |
| | Voltage | V/Hz | 220/50 | | - |
| Machine | Floor area (length × width) | mm | 3,284 × 1,817 | | 4,195 × 1,978 |
| | Height | mm | 1,755 | | 1,857 |
| | Weight | kg | 5,800 | 6,000 | 7,200 |
| CNC | CNC system | - | FANUC i | | - |

FANUC i

| | | | |
|---|---|--|--|
| Axis control number/display/precision compensation | | Program input | |
| Number of control axes | 2 axes (X,Z)/3 axes (X,Z,C)/X,Z,B/4 axes (X,Z,Y,C) | Compound fixed cycle 1,II | |
| Control number of shafts at the same time | 5 axes (X,Z,B,C,A)/6 axes (X,Z,Y,B,C,A) | Lathe fixed cycle | |
| Number of spindle | 2 axes [Up to 4 axes] | Auxiliary/spindle speed function | |
| Minimum setting unit | 3 axes (1 system) X,Z,Y,B axes: 0.001 mm(0.0001 inch) | Accessibility | M4 digit |
| Minimum moving units | O A-axis: 0.001 deg X,Z,Y,B axis: 0.001mm(0.0001 inch) CA axis: 0.001 deg | Grade raise M code Spindle speed function | High speed/multiple/bypass M |
| Feet/metric conversion | 320/G21 | Spindle magnification orientation | 0% to 150% M19(S) |
| High response vector control | | Rigid tapping Constant linear spindle speed control | G96,G97 |
| Interlock | All axes/every axis | Tool function/tool compensation | |
| Machine lock | All axes | Tool function T2 bit + Compensation 2 bit | |
| Back backlash compensation | ±0~9999 pulse (fast shift/cutting advance) | Tool life management | |
| Position switch | | Cutter compensation number 1, 2, 8 pairs | |
| LCD/MDI | 8.4 "10.4" Color LCD] | Tip radius compensation G40,G41,G42 | |
| Feedback | Absolute motor feedback | Shape/wear compensation | |
| Storage travel mom check | Overtravel | Detected tool compensation value B direct input | |
| Store stroke check 2,3 | | Editing function | |
| Pm-c axis control | | Job program storage | 512KB |
| Operations | | logged in | 1000 |
| Automatic operation (storage) | | Program protection | |
| M DI operation | | Background editing | |
| D N C operation | DNC software /CF card required | lengthening workpieces | Copy, move and change of NC |
| Program restart | | Memory card program edit & operation | |
| Error Operation Prevention | | Data input/output and interface | |
| Program check function | Run empty | VO interface CF card, USB storage, embedded Ethernet interface | |
| Single program segment | | Screen hard copy | |
| Search function | Program number/serial number | External information | |
| Interpolation function | | External keystroke input | |
| Nano interpolation | | External job number lookup | |
| Quick positioning | G00 | Automatic data backup | |
| Straight line compensation | G01 | Setup, display, diagnose | |
| Cylindrical interpolation | G02,G03 | Self-diagnostic function | |
| Precise stop mode | Single: G09, continuous: G61 | Historical Display | Alarm and operator information with operations |
| Adjust the time | G04,0 to 9989.9989 sec | Run hours/job count display | |
| Segment skip | G31 | Maintenance information | |
| Reference point return | Reference point 1: G28, reference point 2: G30 | Actual cutting advance rate display | |
| Thread/synchronous cutting | Line point pole search: G27 | Spindle speed display /T code | |
| Thread cutting retractor | | Graphic display | |
| Variable lead thread cutting | | Operate the load on the monitor screen spindle/servo unit, etc | |
| Multiple/continuous threads | | Power monitoring spindle and servo unit | |
| Feed function/acceleration and deceleration control | | Spindle/servo set display | |
| Hand wheel in Sau | Fast movement Spot move: 0~2,000 mm/min(79ipm) Manual control: x1,x10,x100 pulses | Multilingual display supports 26 languages Dynamic switching language display is included in the country language display | |
| Cutting into group commands | Liner point return | LCD Screen Saver Screen Saver Handle select BST(Reverse Torque Limit) Functions of different machine specifications | |
| Jin Sau multiplier | Enter the F code directly | Cs Profile Control (C-axis & A-axis) | MIII,MS,Y,SY,LF-MIII,TTMS,TTSY |
| Cut into Sau command | 0 to 200%(10% units) | interpolation | MIII,MS,Y,SY,LF-MIII,TTMS,TTSY |
| Jin Sau multiplier | 1%, 25%, 50%, 100% | Cylindrical interpolation | MIII,MS,Y,SY,LF-MIII,TTMS,TTSY |
| Remonstrating to Sau multiplier | G98 | Drilling fixed cycle | MIII,MS,Y,SY,LF-MIII,TTMS,TTSY |
| Multiplier cancel | G99 | Spindle positioning expansion | MS,SY TTS,TTMS,TTSY |
| Enter sau per minute | 1 program segment | control | MS,SY TTS,TTMS,TTSY |
| Program input | | Torque control | MS,SY TTS,TTMS,TTSY |
| Paper tape code | FAS ^o | Y-axis compensation | Y,SY,TTSY |
| Optional program segment skip | 1 | Tilt shaft control | Y,SY,TTSY |
| Absolute/increment instruction | G90/G91 | Blend/overlay control | MS,SY TTS,TTMS,TTSY |
| Program stop/end | M00,M01/MO2,M30 | Balanced cut | MS,SY TTS,TTMS,TTSY |
| Maximum programmable size | ±999,999.999mm(±99,999.9999 inch) | | |
| Plane choice | X-Y:G17/Z-X:G18/Y-Z:G19 | Select program segment to | 9 of them |
| Workpiece coordinate system setting | G52,G53,6 pairs (G54~G59) | High speed network | Optional board required |
| Manual absolute value | Fixed open | Data server | Optional board required |
| Programmable data entry | G10 | Level 8 data protection features | |
| Subroutine calls | Level 10 | Number of tool | 200 sets |
| User macros | # 100 ~ # 199, # 500 to # 999 | Program storage capacity | 5120m(2MB) |
| G code system | A | Multilateral turning (2 | MIII,MS,Y,SY,LF-MIII,TTMS,TTSY |
| Programmable mirror | G51.1, G50.1 | How-to Guide i | Interactive Programs |
| G code to prevent buffering | G4.1 | Moving image display | |
| Drawing dimensions are entered directly | Include chamfer/corner R | | |