GHT SERIES

Box way type Turning lathe GHT405/405L/405XL

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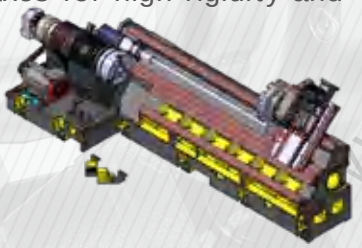
GHT405 SERIES

GHT 405 SERIES is a medium and large horizontal turning center with a maximum processing length of 3m. The gear box spindle and full-shaft hard rail structure are suitable for heavy duty cutting, and are widely used in oil and gas, construction machinery and other industries for processing large pipe and shaft workpieces.

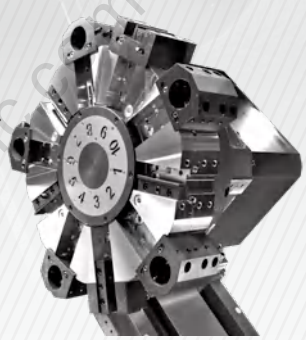
1 High rigidity structure

45° slanted bed with low center of gravity structure and hard rails widened across all axes for high rigidity and stability.



2 Efficiency

The main shaft of the gear box is suitable for heavy-duty cutting, and the servo turret effectively shortens the non-cutting time and improves the machining efficiency



3 Convenience

The mobile operating panel is easy to move and observe the processing status for increased convenience.

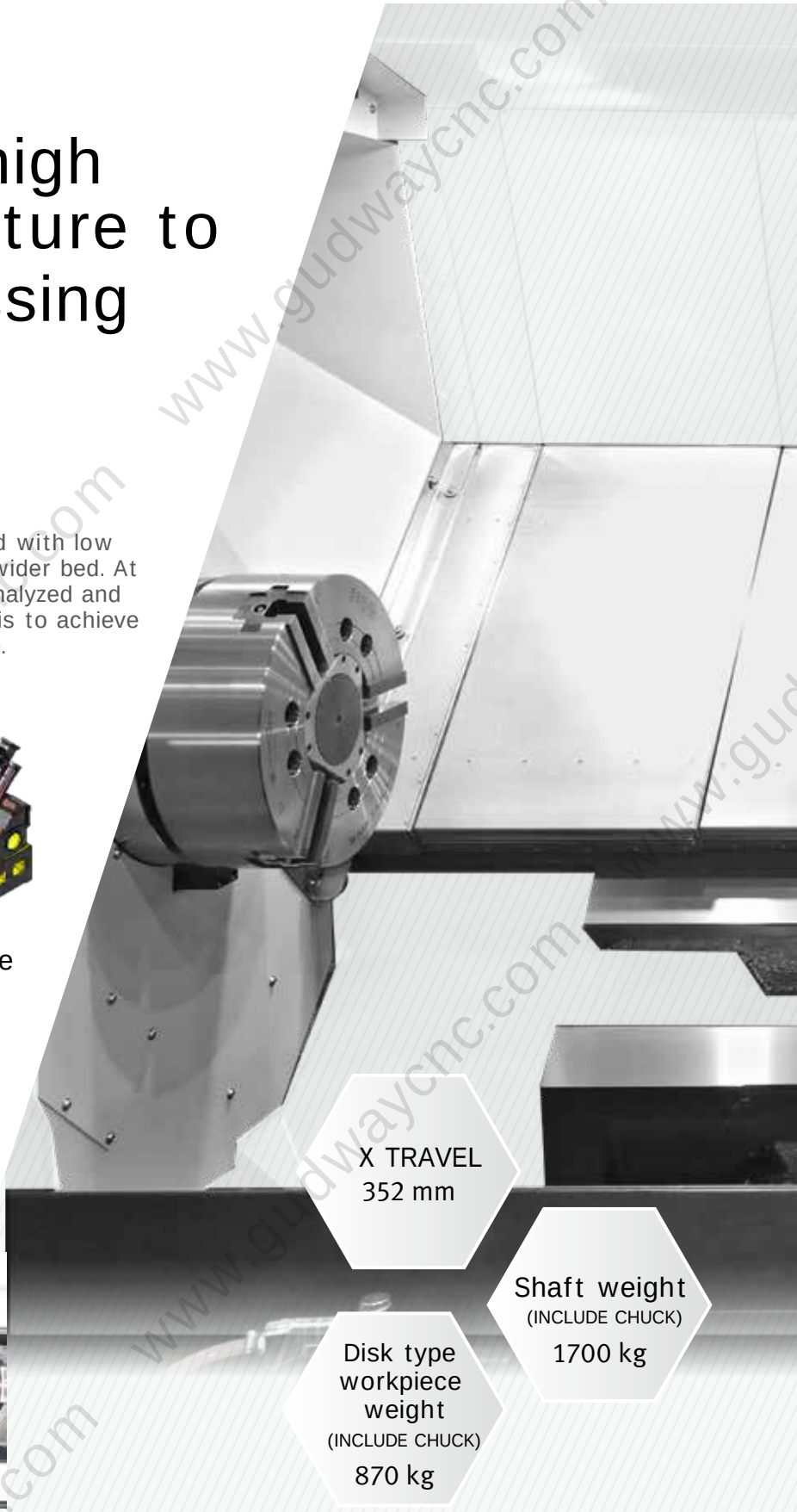
High rigidity, high stability structure to ensure processing performance

1 High stability

GHT 405SERIES adopts 45° inclined bed with low center of gravity structure and has a wider bed. At the same time, the bed structure is analyzed and optimized by FEM finite element analysis to achieve the best stability of the bed structure.

2 High rigidity shafting structure

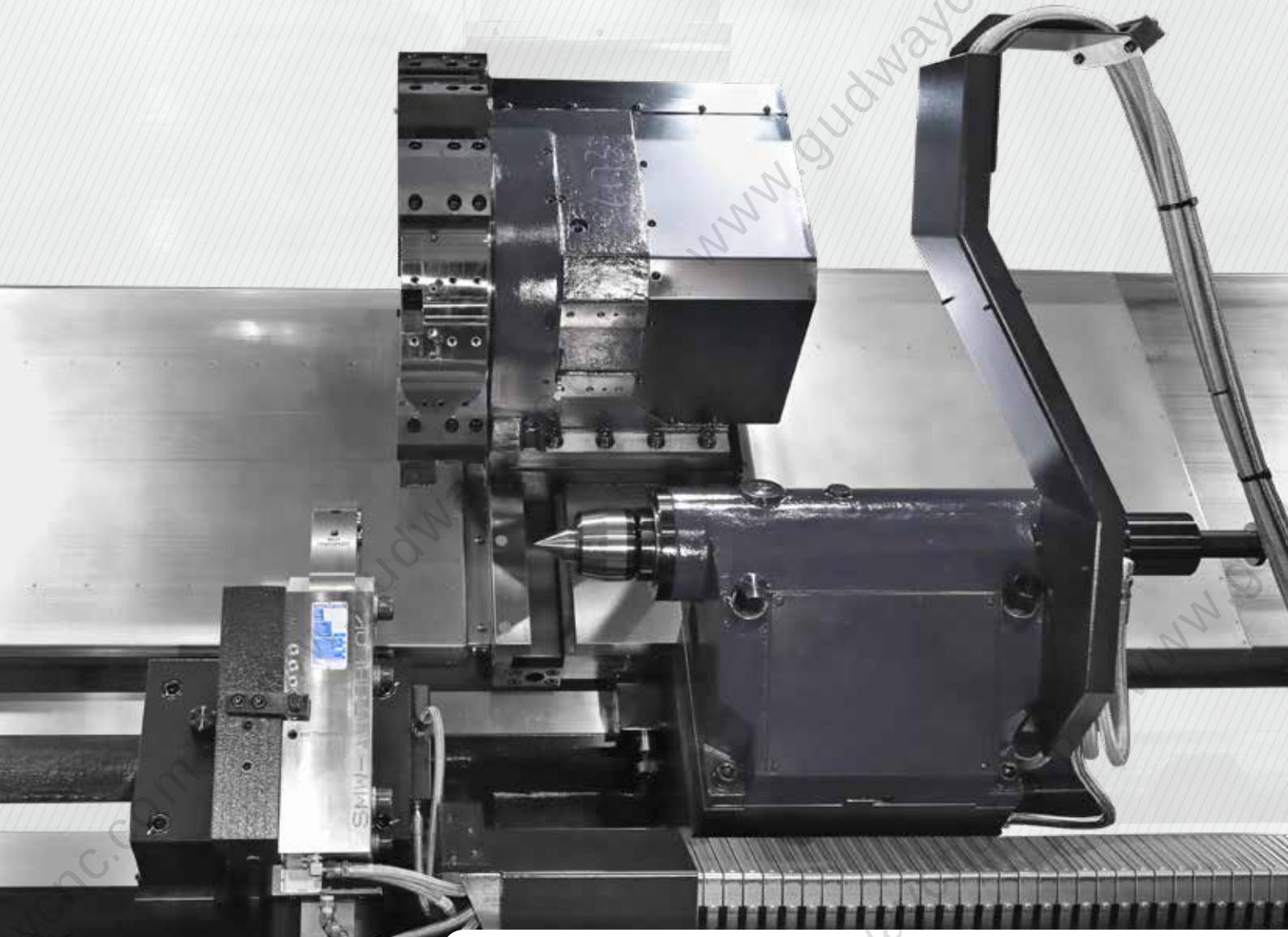
Two axes all hard rail structure design, wide guide surface and span of larger rail spacing, so that the force area is larger, the force is more uniform, improve the rigidity of the bed, two axes are driven by maintenance-free digital AC servo motor, large torque drive motor and ball screw directly connected without intermediate gear.



X TRAVEL
352 mm

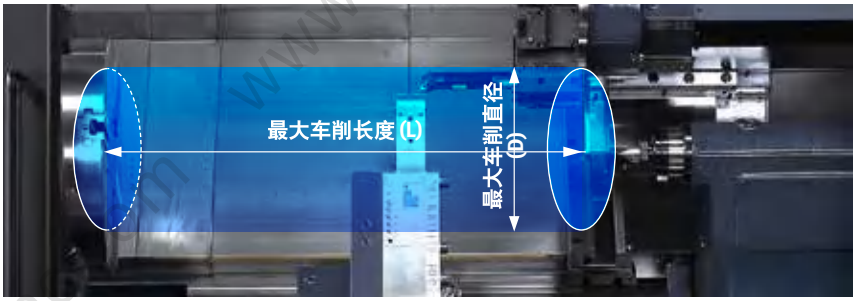
Shaft weight
(INCLUDE CHUCK)
1700 kg

Disk type workpiece weight
(INCLUDE CHUCK)
870 kg



Working range

Wide processing range can deal with a variety of parts processing.



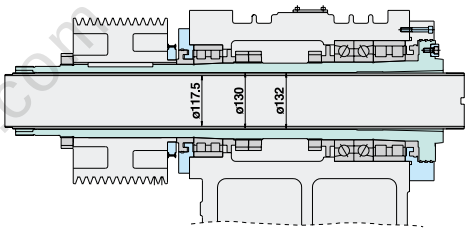
Model	Max. turning dia	Max truning length
	"D" (mm)	"L" (mm)
GHT 405	550	1042
GHT 405L	550	2092
GHT 405XL	550	3120

High efficiency spindle

1 Spindle

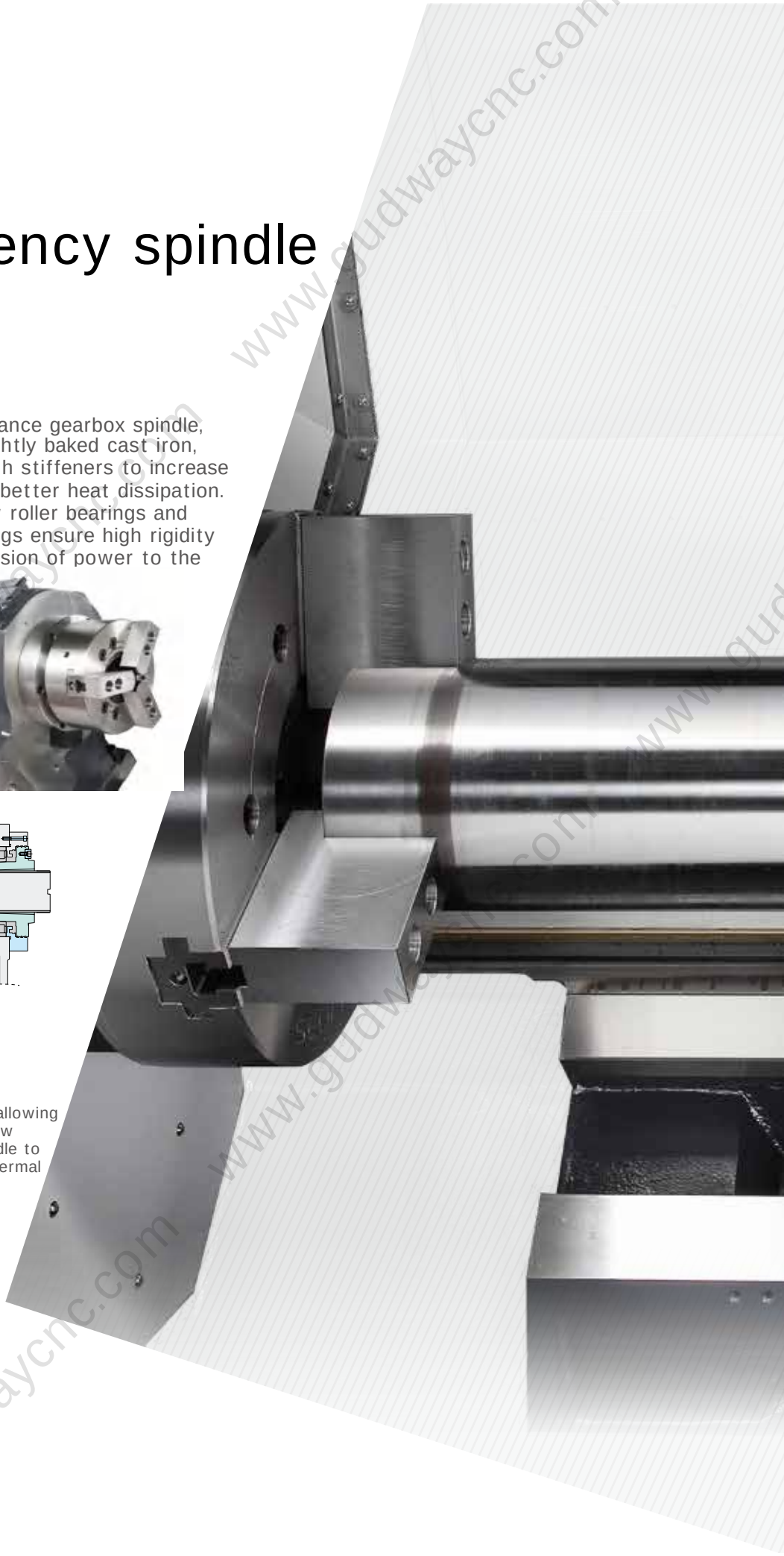
Equipped with a high performance gearbox spindle, the spindle box is made of tightly baked cast iron, and the outer side is cast with stiffeners to increase the surface area and achieve better heat dissipation. P4 class precision double row roller bearings and double angular contact bearings ensure high rigidity and efficiency in the transmission of power to the spindle.

Spindle face diagram



2 Mainshaft gearbox

Power is transmitted to the spindle through a two-speed transmission (allowing for high speed and high power at low speed), isolating the motor and spindle to effectively eliminate vibration and thermal conductivity.



Spindle power-torque

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Spindle 2000 r/min Motor power 35/26/22 kW

High efficiency servo drive tool tower

1 Servo turret

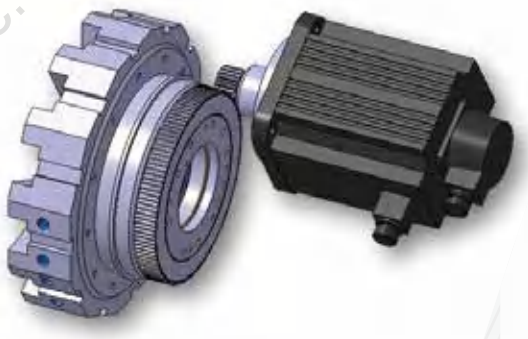
The tool tower is driven by an efficient servo motor , and the drive system and the number of components of the servo tool tower are optimized and improved. While reducing the failure rate, the maintenance is more convenient, and the stability and reliability of the machine tool are improved.

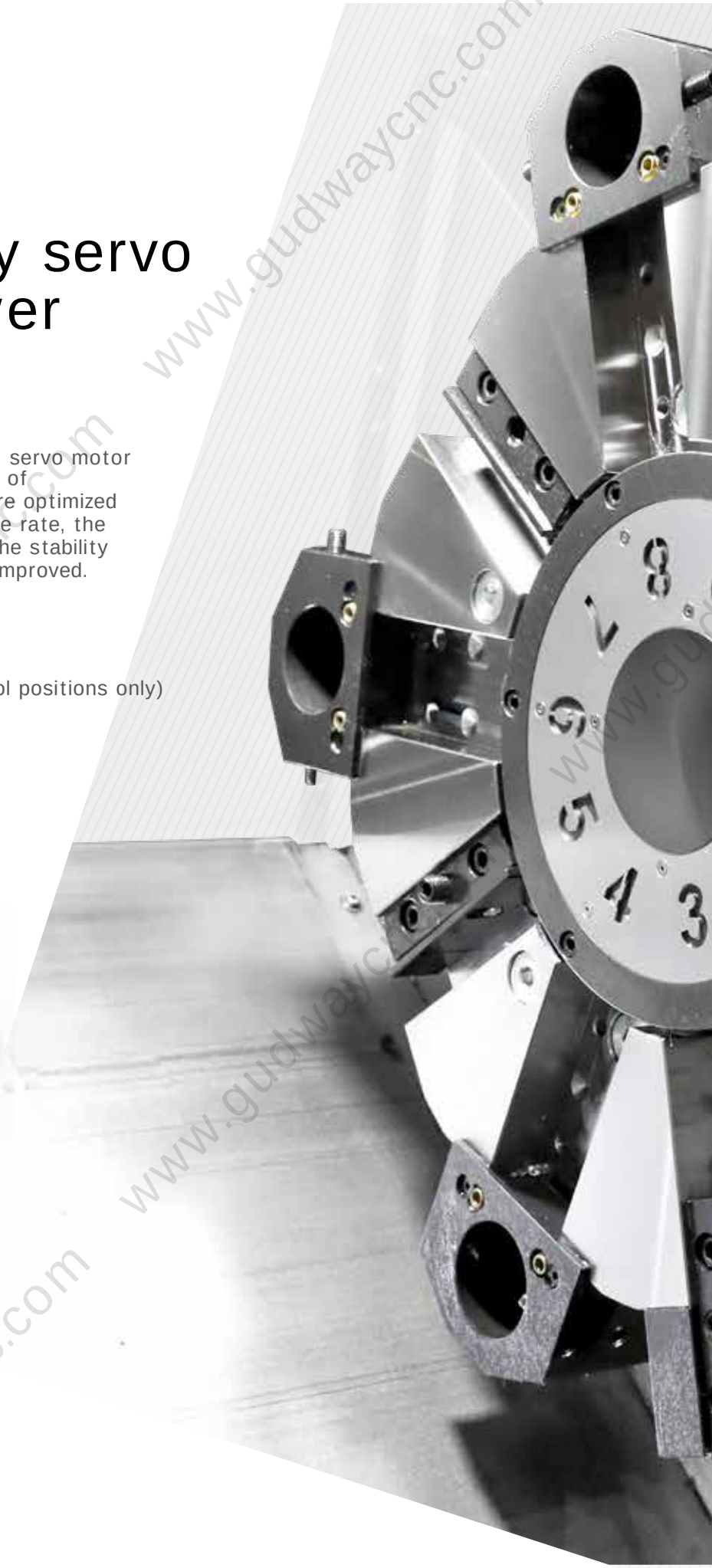
Tool number
10 ea

Transposition time (rotate adjacent tool positions only)
0.25 s

Tool clamping force
142 kN

Rat tooth disc size
320 mm

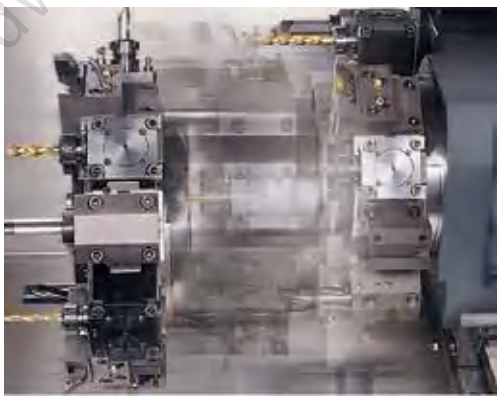




Fast feed

X-axis
16 m/min

Z-axis
20 m/min



CONVENIENCE

1 Convenience

The newly designed operating panel enhances ease of operation with universal buttons and positioning.

10.4 inch display

USB & PCMCIA CARD (ST)
New ergonomic design

Easy to install button switch additional options

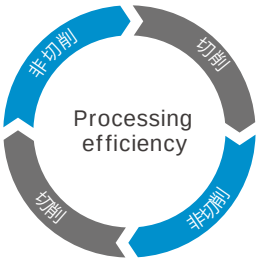
Simple software

Raise productivity

Reduce non-cutting time

10%

The non-cutting time during machining is greatly reduced, thus guaranteeing maximum productivity.



Tool monitor OP

During the cutting operation, abnormal loads caused by tool wear or damage are detected and alarms are triggered to prevent further damage.

2 Mobile operating panel *

The mobile operating panel is easy to move and observe the processing status for increased convenience.

*Only for GHT405L/XL

Excellent processing performance

OD TURNING	
TURNING SPEED	210 m/min
FEEDRATE	0.55 mm/rev
CUTTING DEPTH	11.9 mm

Inside diameter turning	
Turning speed	280 m/min
Feedrate	0.1 mm/rev
Cutting depth	3 mm
Tool length	4.0 D

U DRILL（2AXIS）	
CUTTING TOOL	80 m/min
SPINDLE SPEED	750 r/min
FEEDRATE	0.2 mm/rev

Various optional configurations

1 Chip conveyor OP

Chip conveyor	Material	Note
hinge type	steel	The most typical type of chip conveyor is suitable for steel production of chips of 30mm or longer length
drag type	cast steel	The conveyor with magnet is suitable for the processing of cast iron with small and fine chips

drag type

hinge type

2 OPTIONAL

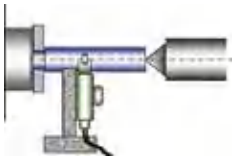
Oil OP

Auto tool setting OP

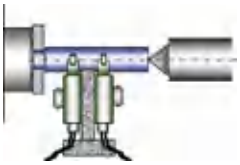
oil mist collector OP

Hydraulic center frame OP

Single hydraulic center frame



Double support hydraulic center frame



If you need to turn longer parts, you can use various types of hydraulic center frames (single, double supported or double supported)

Tool system

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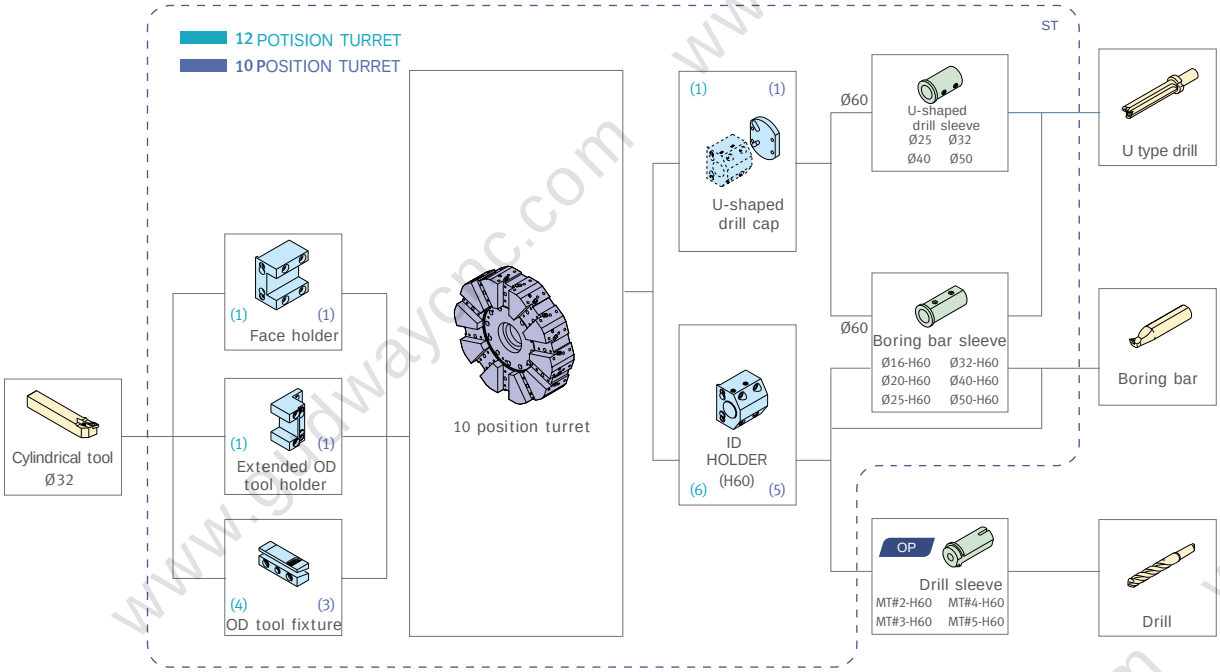
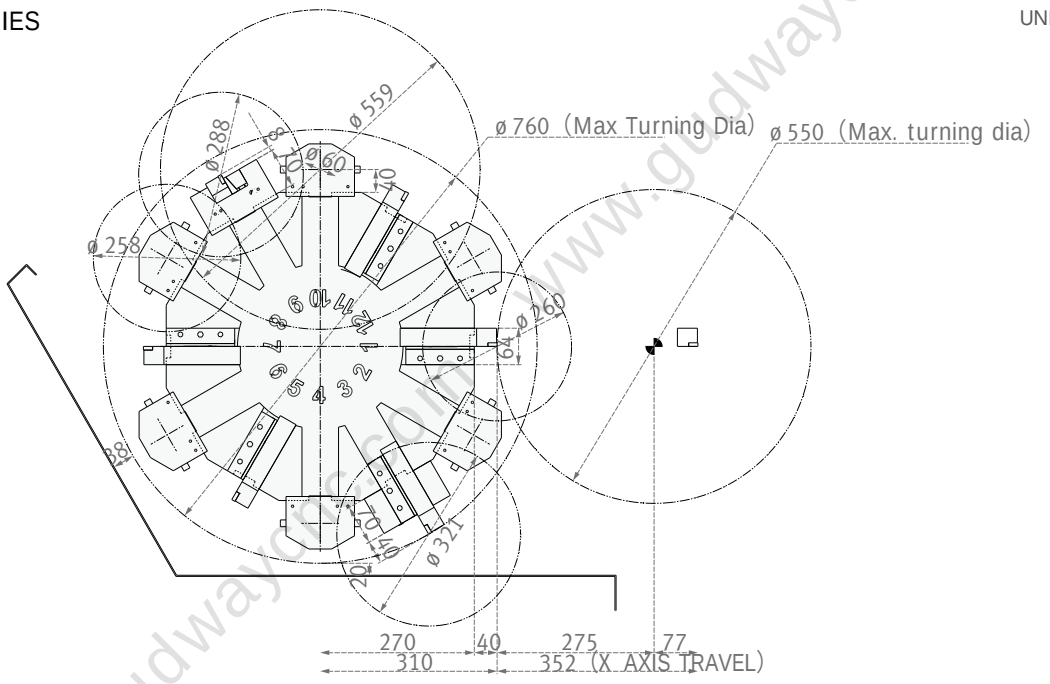
UNIT: mm



Tool interferogram

GHT405 SERIES

UNIT: mm

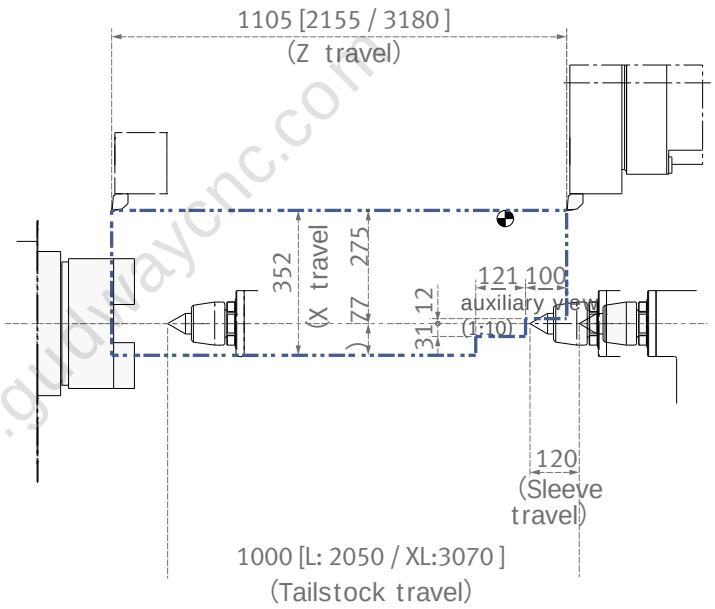


Working area

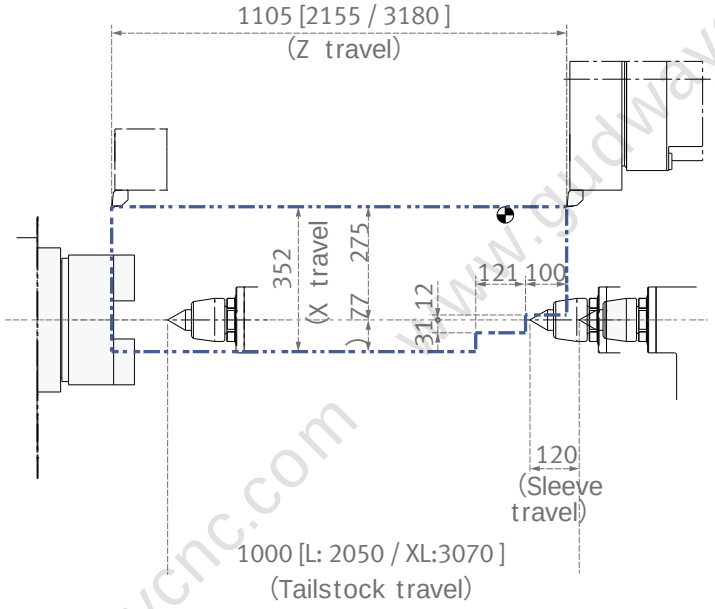
GHT405 SERIES

UNIT: mm

OD HOLDER



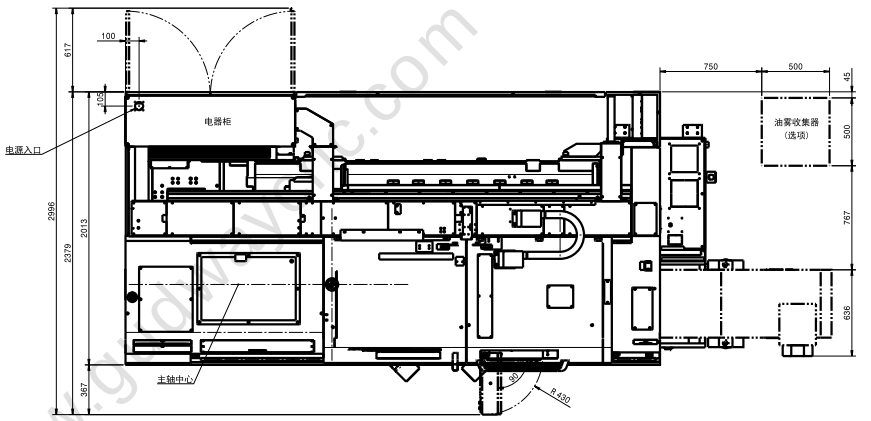
ID HOLDER

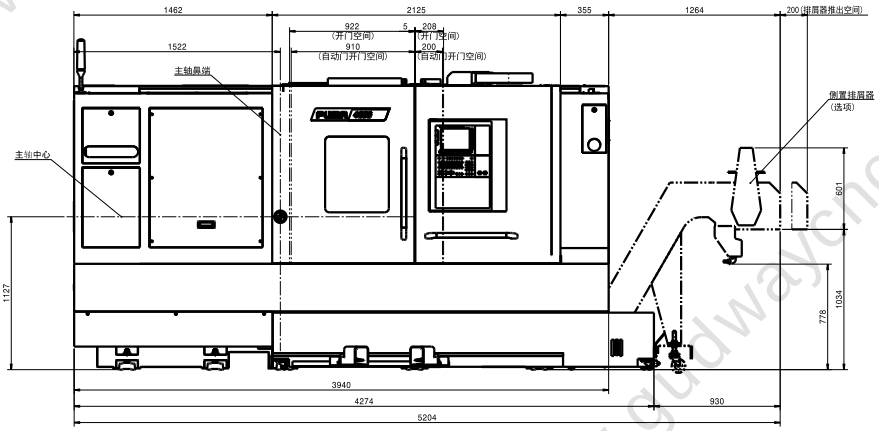


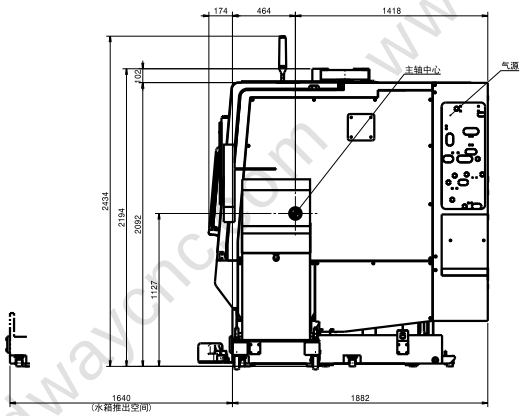
SIZE

GHT405

UNIT: mm



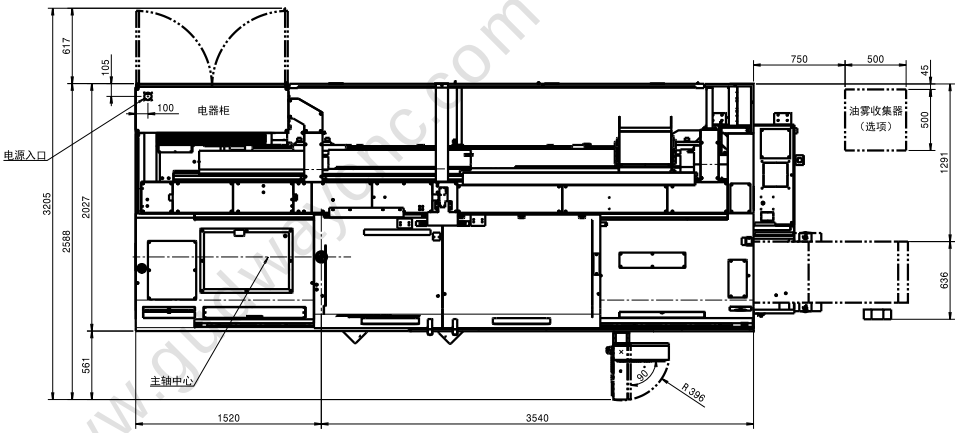


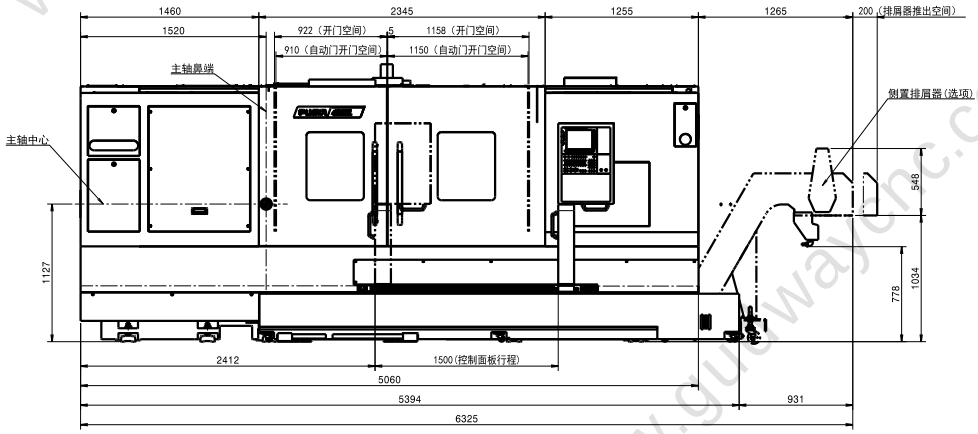


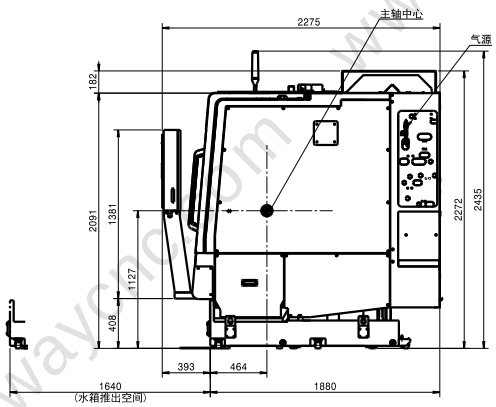
SIZE

GHT405L

UNIT: mm



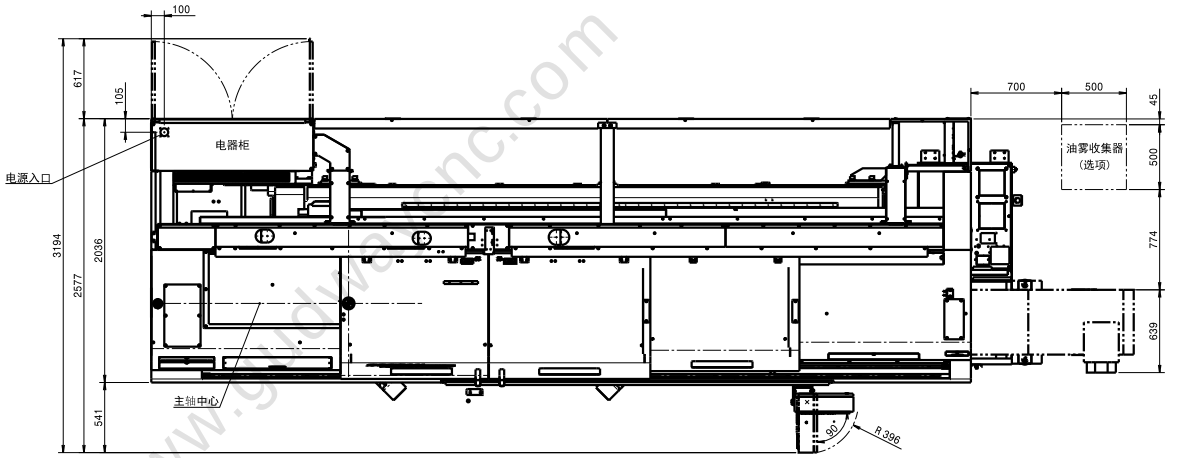


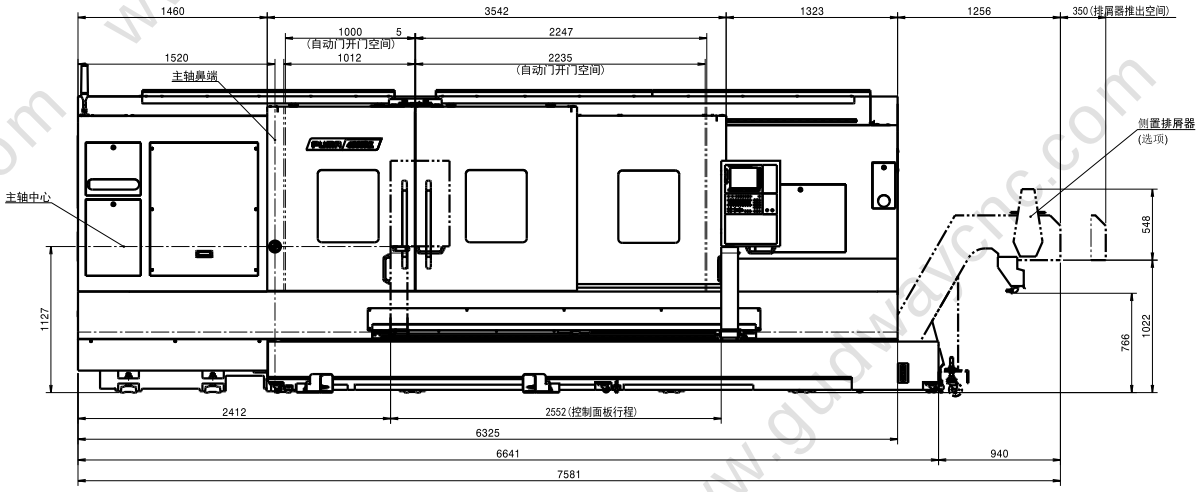


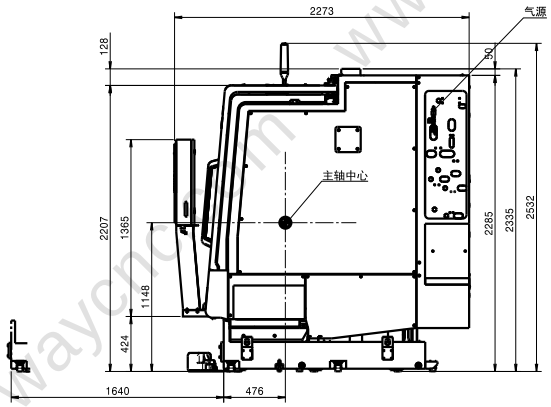
SIZE

GHT405XL

UNIT: mm







Parameter

GHT 405SERIES

ITEM		UNIT	GHT 405	GHT 405L	GBT405XL
Machining ability	Machine bed Max Turning Dia	mm	790		
	Saddle Max Turning Dia	mm	590		
	Recommended turning diameter	mm	380		
	Max. turning dia	mm	550		
	Max truning length	mm	1042	2092	3120
	Bar machining diameter	mm	116.5		
Spindle	Max pindle speed	r/min	2000		
	Spindle nose	ASA	A2-11		
	Spindle through hole diameter	mm	132		
	Spindle bearing dia(front)	mm	180		
	Max. spindle Torque	N·m	2379		
Travel	X-axis	mm	352 (77+275)		
	Z-axis	mm	1105	2155	3180
Fast feed	X-axis	m/min	16		
	Z-axis	m/min	20		
Turret	Tool number	ea	10		
	Cylindrical tool dimensions	mm	32x32		
	Boring bar diameter	mm	60		
	Turret transposition time	s	0.25		
Motor	Spindle motor power	kW	35/26/22		
Power	Power supply (rated capacity)	kVA	45.65	45.65	45.32
Size	Height	mm	2194	2272	2335
	Floor area Length	mm	4654	5774	7024
	Width	mm	2056	2275	2276
	Weight	kg	9950	11400	12400

STANDARD

Hydraulic chuck&rotary cylinder
Soft clamp
Chuck clamp detection switch
Live tip
Standard tool holder
Hydraulic power unit
Cutting fluid supply equipment
Lubricating oil equipment
Iron filings and safety metal
Working light
Condition light
Foot switch
Front door interlock
Safety nameplate
Leveling bolts & pad iron
Toolbox
Machine instructions and manuals

OPTIONAL

Chip remover
Chip truck
Hard clasp
-1.1 kW x1.0 MPa x 20 L/min(60Hz)
-1.1 kW x0.7MPa x 30 L/min(60Hz)
- 0.75 kW x0.45 MPa x 35L/min(60Hz)
Hard clasp
Automatic power off
Air gun
Water gun
Oil skimmer
Additional holder&bush
Manual tool setter (insert type)
Auto setter (hydraulic type)
Clamp clean blowing device
Clamp clean water blowing
Auto door
Programmable tailstock
Dead center for tail seat (MT#5)
Center frame (manual, hydraulic)
• * Special chuck

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GHT 405 SERIES Basic parameters

NC Specification

FANUC i Plus Series

Shaft control	
Control path 1 path	
Control axis number 2 axis	
Also control axis number 2 axes	
Control axis removal	
Reverse gap compensation	
Reverse clearance compensation for each quick feed and cut feed	
Chamfer start/stop	
Advanced feedforward control	
Location tracking	
Servo HRV controls HRV2	
Imperial/metric conversion	
Interlock all axes/all axes	
Minimum input increment 0.001/0.0001 mm/inch	
Minimum setting UNITC SXC	
Mechanical lock all shafts/all shafts	
Mirror	
Overtravel	
Servo off	
Storage trip detection 1	
Abnormal Load Detection	
Emergency Stop	
Position switch	
Operations	
Autorun (memory)	
MDI run	
Buffer register	
DNC run	
A CF card and a dedicated adapter are required for DNC running with	
Scheduling function	
Running empty	
Incremental feed	X1,X10,X100
Handwheel feed break	
JOG feed	
Manual ten pre-and return	
Hand wheel feed	
Manually return to reference points	
Program number retrieval	
Program restart	
Sequence number search	
Interpolations	
Return to first reference Point Manual, G28	
Return to reference point G30	
Return to reference points 3 and 4	
Nanointerpolating	
The exact way to stop	
Tapping method	
Cutting mode	
Accurate stopping	
Arc interpolation G02,G03	
Continuous thread cutting	
Polygon processing	
Cylindrical interpolation	
Time Out	
High Speed Skip	
Straight line interpolation G01	
Multiple thread cutting	
Positioning G00	

User macros	
Decimal point input/Calculator decimal point input	
Diameter/radius specified	
Coordinate offset direct input	
G Code Category B/C	
Any Angle chamfer/corner R	
10x input UNIT	
Mark Skip	
Manual absolute value ON/OFF	
Maximum instruction value	±9 digits
Composite fixed cycle	
Composite fixed Cycle II	
Select program segment Skip	9 pieces
Parity Check	
Plane selection	G17,G18,G19
Program file name	04 digits
Programmable data entry	G10
Sequence number	N8 digits
Subroutine instruction call	nesting
Paper Tape Code	EIA RS422/IS0840
FANUC10/11 System paper tape format	
Workpiece coordinate system	G52-G59
Job coordinate preset	
User software capacity	6M
Macro actuator	
Tool Function 1 Tool compensation	
Self-actuating tool compensator	
digits	
Tool function	
Tool shape/wear compensation	
Tool life management	
Tool radius compensation G43,G44,G49	
Tool position offset 128 pairs	
Number of tool compensation	
Tool life management extension	
Program editing	
Background editing	
Extension editing	
The number of logged programs is 1000ea	
Program editing	
Program protection	
Program storage capacity 2 M	
Set and display	
Show the actual speed	
Display alarm information	
Display alarm history	
Most indicates the current set	
Display the actual spindle rotation number /T code	
Help Features	
Display in languages by country	
Show operation resume	
Ye Xiaosan	
Show program comment 32,31 characters	
Show working time/number of parts	
month	
Servo information screen	
Spindle info screen	

Return to reference point Detect G27	
Thread cutting/synchronous feed	
Thread cutting cycle retracted	
Torque Limit Skip	
Variable pitch thread cutting	
Feed function	
Acceleration/deceleration	
Cutting feed speed box system	
Feed per minute	G98
Each turn to feed	G99
Feed speed multiplier (10%UNIT	0-200%
JOG magnification (10%UNID	0-2,000 mm/min
Manual	
Avoidance ratio =0.50,100%	
Givens	
Auxiliary/spindle speed function	
Spindle positioning	
Actual shaft speed output	
Auxiliary function locks	
Constant cycle speed control	
Accessibility M⁸ bits	
Spindle features S5 digits	
Spindle serial output S5 digits	
Spindle multiplier 0-150%	
Spindle output switching	
Rigid tapping	
Program input	
Absolute/incremental instruction	
Append user macros public variables	
Fixed loop for drilling	
Single shape fixed loop	
Arc radius R specified	
Control input/output	
Coordinate system set to G50	
- Set Offset	

Graph display! Show the knife path display	
Status display	
Clock function	
Parameter checksum function	
Data input/output	
External data entry	
External key input	
External program number retrieval	1-9999
External job number retrieval	9999
Input/output of memory card	
Reader/puncher interface	CH1. Connect
RS232C interface	
USB port	
Automatic data backup	
Other	
Start running and indicator light	
Display unit 10.4 "color LCD/MDI	
Feed is held and indicator light is on	
NC and servo preparation	
PMC system Oi-PMC	
Ethernet features	
EOP(Easy operation screen)	
Select Specifications	
- Data Server	
· Hand wheel feed back	
· Dynamic graphic display	
· Operating guidance 1	
· Operation guide oi	
- Tool load monitoring	
-CF card (2GB)	
-PROFIBUS-DP	
·AI profile control I	Maximum number
-PROFINET	
-CC-LINK	
·AI Contour control II	Max number of
- Fast Ethernet	

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GHT405 SERIES

ITEM	UNIT	GHT **405**	GHT **405L**	GHT **405XL**
Max. turning dia	mm	Ø550		
Max truning length	mm	1042	2092	3120
Chuck dia	inch	Ø380		
Spindle motor power	kW	35/26/22		
Max spindle speed	r/min	2000		
Tool number	ea.	10		

SUZHOU GUDWAY CNC EQUIPMENT CO.,LTD

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