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NEWAY

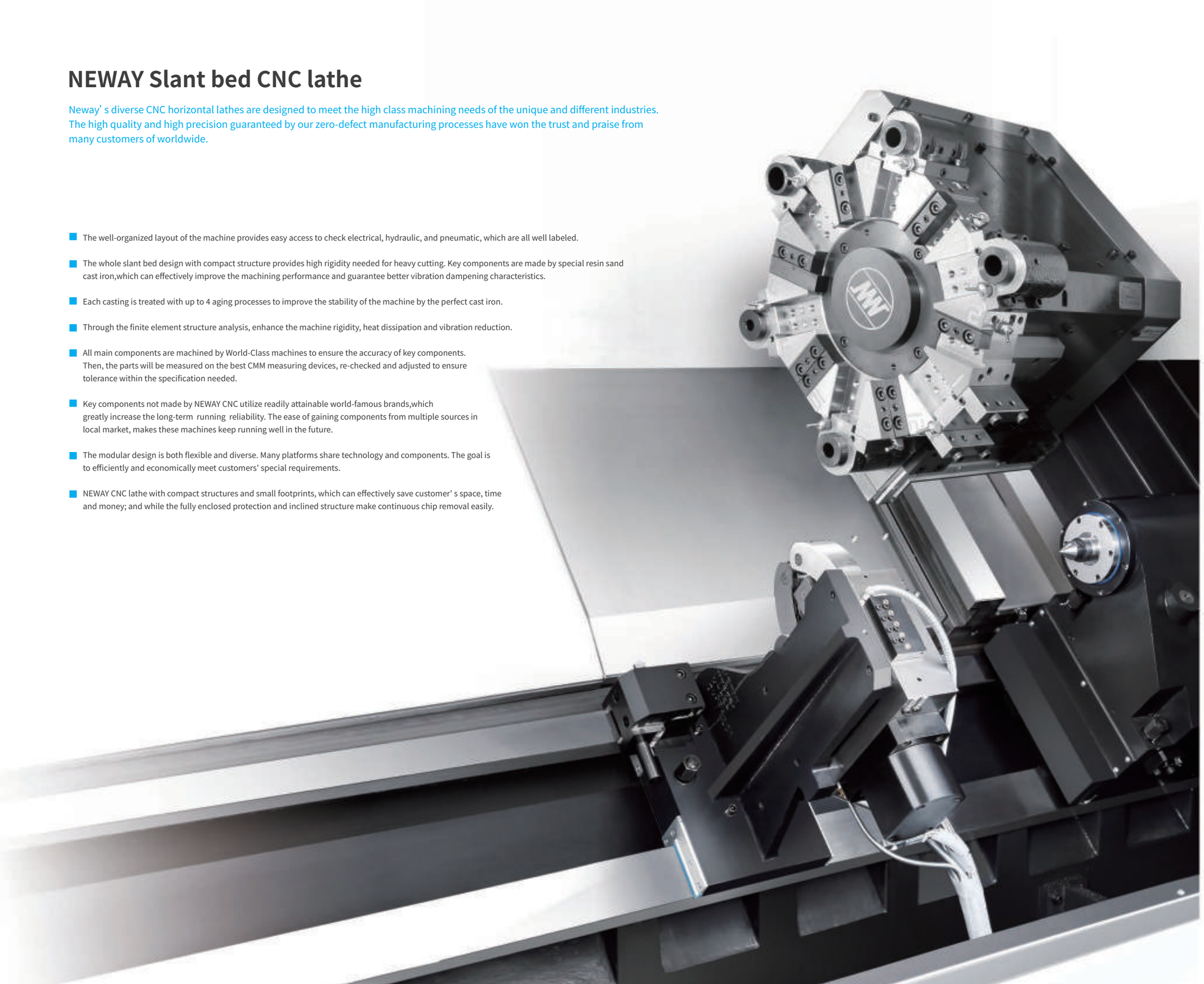
Slant bed CNC lathe
NL Series

Cat.NO.:E-NL-2024-01

NEWAY Slant bed CNC lathe

Neway’ s diverse CNC horizontal lathes are designed to meet the high class machining needs of the unique and different industries. The high quality and high precision guaranteed by our zero-defect manufacturing processes have won the trust and praise from many customers of worldwide.

- The well-organized layout of the machine provides easy access to check electrical, hydraulic, and pneumatic, which are all well labeled.
- The whole slant bed design with compact structure provides high rigidity needed for heavy cutting. Key components are made by special resin sand cast iron,which can effectively improve the machining performance and guarantee better vibration dampening characteristics.
- Each casting is treated with up to 4 aging processes to improve the stability of the machine by the perfect cast iron.
- Through the finite element structure analysis, enhance the machine rigidity, heat dissipation and vibration reduction.
- All main components are machined by World-Class machines to ensure the accuracy of key components. Then, the parts will be measured on the best CMM measuring devices, re-checked and adjusted to ensure tolerance within the specification needed.
- Key components not made by NEWAY CNC utilize readily attainable world-famous brands,which greatly increase the long-term running reliability. The ease of gaining components from multiple sources in local market, makes these machines keep running well in the future.
- The modular design is both flexible and diverse. Many platforms share technology and components. The goal is to efficiently and economically meet customers' special requirements.
- NEWAY CNC lathe with compact structures and small footprints, which can effectively save customer' s space, time and money; and while the fully enclosed protection and inclined structure make continuous chip removal easily.



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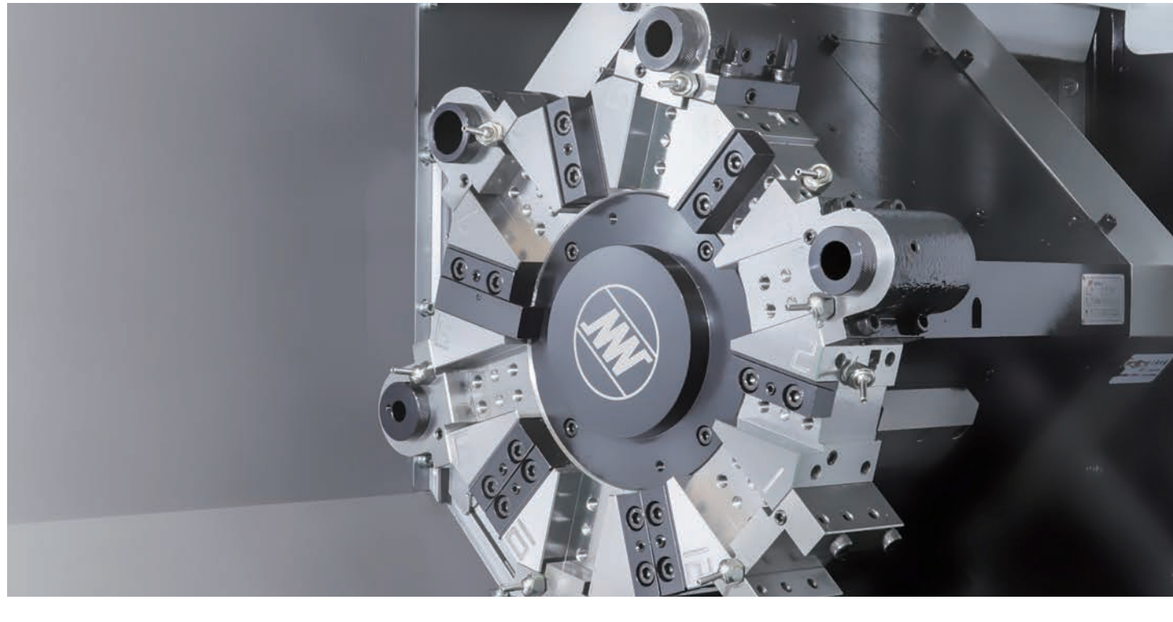
01 High-Speed

Independently designed spindle, bed, saddle and tailstock are independently designed. The maximum speed of the machine tool can reach 6000rpm, and the rapid traverse speed can reach 30m/min, which greatly improves the processing efficiency of the machine tool.



Spindle

- Independently designed, the front and rear bearing supports are optimized by the finite element structure to ensure excellent rigidity and precision.
- The spindle bearing mounting surface and the locking nut mounting thread are formed through a single grinding process. This method provides precise coordination between the spindle and the spindle box, which improves the spindle speed and stability.
- All spindle bearings are World Class P level machine tool bearings. They use permanent grease lubrication, to guarantee the higher precision and excellent longevity.

Max Spindle Speed

NL16/20 6000r/min

Rapid Traverse X/Z

NL16 Rapid Traverse X/Z 30/30m/min

NL20 Rapid Traverse X/Z 24/30m/min

Headstock

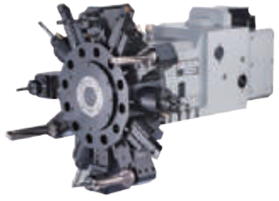
- The use of thermal symmetry design combines with the wide range of heat dissipation. Reinforce rib supported structure dramatically resists and reduces the deformation caused by internal heat generation in the machine tool and they can also control thermal growth to improves the machining accuracy.
- The front and rear bores of the spindle box are completed through one-step machining on the World-Class Swiss SIP boring machine. This high level boring process provides micron tolerances and ensures excellent bore alignment and spindle alignment.

Turret

- Standard 8 station turret with customized thickened tool disc improve turret rigidity, cutting efficiency, positioning accuracy and realize automation of processing. Neway also offers various turrets, such as 10 or 12 station turret as options.
- Reinforced tool holders and keyway positioning stabilizes tool point and minimizes harmonics under heavy load cutting conditions.
- Different turret can be equipped according to customer's requirements.

- Electric turret

- Servo turret

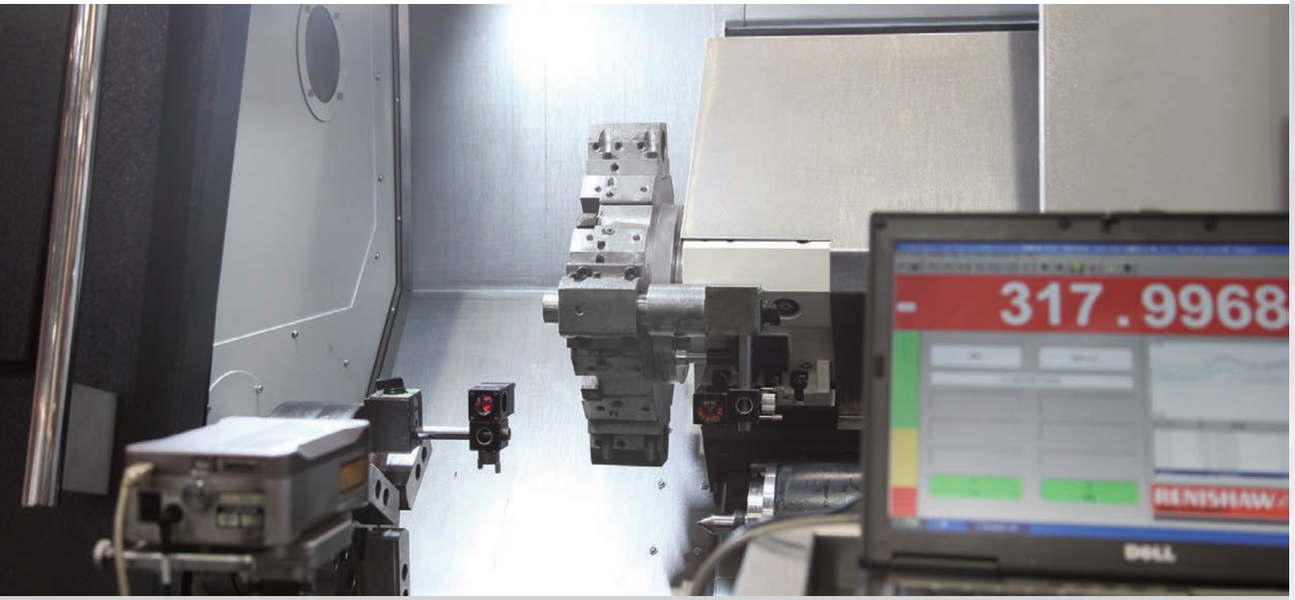


- BMT Live turret

- VDI Live turret

02 High Precision

All structural parts are produced by casting, aging treatment and managed correctly



- Laser interferometer testing to guarantee the all axes' precision.

- The castings are machined for flatness and squareness with one of the World-Class Zayer Five-sided Bridge Milling machines. Smaller parts are manufactured on World Class Starrag- Heckert Athletic Horizontal Machining Centers.
- Swiss Kellenberger cylindrical grinding machine machine the spindles. Huge Favretto Gantry type grinding machine finish the all castings grinding to realize the best castings in the World used on Neway machines.
- All these machines are some of the World' s Finest, which are continuously calibrated to ensure extremely predictably stable high precision.
- The overall bed design has plenty of built-in reinforce ribs, which is optimized through the finite element analysis. This realize high rigidity, better heat dissipation (thermal symmetry) and more accurate machining.

Fine Craftsmanship

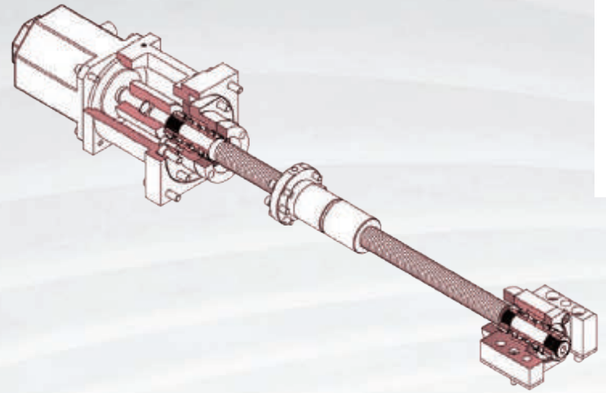
The all contact surfaces, including spindle mounting surface, turret, tailstock,and pedestal base, are meticulously scraped to achieve high assembly accuracy, rigid structure, and balanced load.

Double-nut Ball Screw

High speed, silent ball screw with double nuts, by pre-tensioned to realize no backlash, high precision and rapid travel.

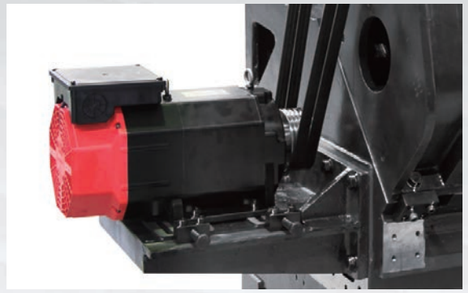
Pre-tensioning

The ball screw adopts the pre-tension process, which effectively reduces the slack in the ball screw and helps reduce the heat transfer and friction. This improves the accuracy and strengthens the rigidity and heat deformation resistance.



Spindle Motor

The motor seat is beside of the machine, eliminates heat transfer and vibration caused by the motor.

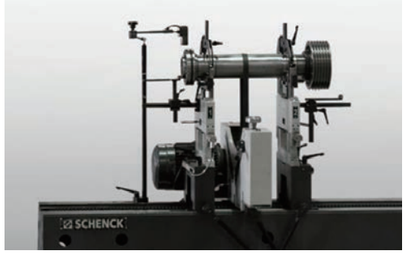


03 High Stability

In the critical components assembling, multiple measuring and quantifying assembly process is the key to achieving Neway' s quality goal. Each process has strict quality control to ensure the highest stability of the end-product.

Spindle Performance Testing

a. Performs dynamic balance test on the spindle to guarantee the stability of the high-speed rotation of the spindle.



b. Through 48 hours spindle run-in test, monitoring the temperature changing of the rotating parts, applying corrective actions to eliminate any out of tolerance conditions of the assembly and ensure the stability and reliability in high-speed spindlerotating.

Torque Wrench

All major locking screws are locked by specially calibrated torque wrenches according to process standards to ensure the stability and reliability of the connection.

Tension Test for The Spindle Belt

The all spindle belts' tension is measured by a special sonic tensiometer and adjusted to perfect condition to ensure stable operation of the machine.

Availability of Key Components

Global purchasing of available key parts and selection of first-class brands in the industry have significantly ensured the long-termsustainability of the machine tools through attainability of available parts through World Class suppliers.

Neway' s Casting Multiple Aging Process Produces World Class Castings

Through natural aging and secondary aging, the internal stress is fully released, and the machine tool accuracy can be maintained for a much longer time.

04 R&D

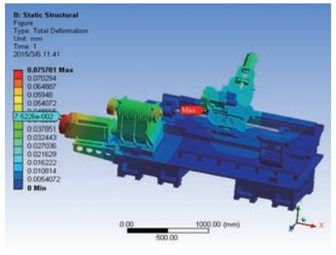
7 R&D departments and 150+ R&D engineers with specific expertise. Neway can develop 20+ new products per year. 10+ continuous improvement projects in fundamental areas, using the PLM full life cycle management system to enhance R&D efficiency.

Ongoing continuously improving quality refining projects:

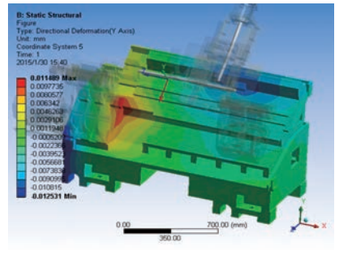
- Static stiffness testing and research of machine tools
- Research on vibration and dynamic stiffness of machine tools
- Research on spectrum analysis of machine tools
- Finite Element Analysis of complete machine and components
- Thermal deformation analysis of entire machine and components
- High-speed ball screw cooling system research and improving
- Research on intelligent development and application of CNC machine tool
- High-pressure chip breaking test and application

Finite Element Analysis

The essential parts are all based on finite element analysis. The layout of the optimized structure is cast from high-quality cast iron materials with high stability and excellent shock absorption.



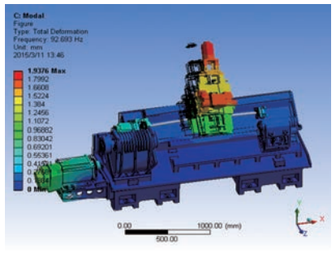
- Machine stiffness analysis deformation map shows where more material needs to be applied



- Y direction analyzes deformation

Dynamic Analysis

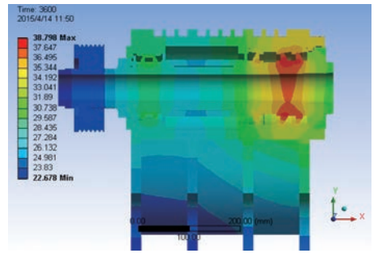
Through dynamic performance balancing analysis, greatly reduce harmonics, improves the natural frequency and vibration resistance of the machine tool.



- Modal dynamic analysis

Thermal Analysis

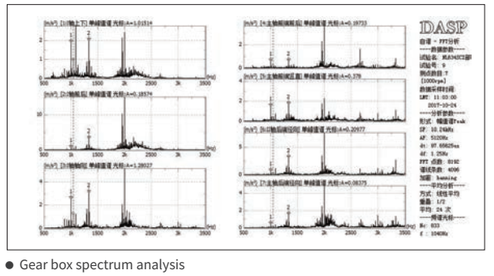
Thermal analysis of the spindle components reduces the thermal deformation of the spindle.



- Thermal analysis of lathe spindle

Vibration and Spectrum Analysis

The vibration spectrum analysis prevents and eliminates the excessive vibration of the machine.



- Gear box spectrum analysis

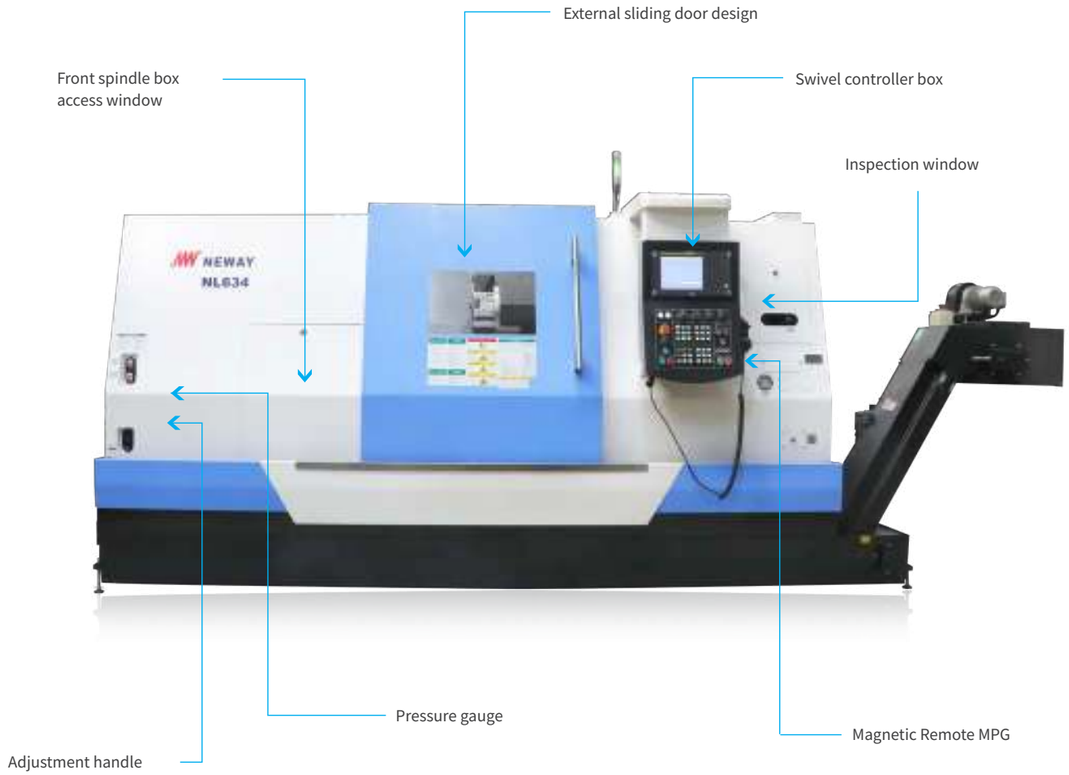
Static and Dynamic Stiffness Studies

By measuring and studying the static and dynamic stiffness properties of the machine, Neway ensures the excellent stiffness performance.

- Dynamic stiffness test

05 Ergonomic Operator Friendly Design

Careful attention to design detail along with, constant optimization, ease of operation, convenient location of keyboard and ease of maintenance make our machines a favorite.



- External sliding door design: easy to clean, no chip buildup
- Swivel controller box: conveniently rotates to the optimal viewing position
- Pressure gauge and adjustment handle: convenient reading and adjustment
- Front spindle box access window: easy to maintenance and repair
- Inspection window: easy to inspect hydraulics and pneumatics.
- MPG with magnetic: attached to any metal surface

06 Case Studies

These machining applications show abundant choices and versatile configurations of Neway CNC lathe. Neway machine tools are widely use in various industries.

Sliding Sleeve

Industry:	Automotive	Cutting speed:	260m/min
Material:	55#	Workpiece size:	90mm
Task:	Thin-walled parts chip breaking processing	Processing time:	128s
		Processing machine:	NL251

Piston

Industry:	Automotive	Cutting speed:	310m/min
Material:	10#	Workpiece size:	37mm
Task:	High efficiency	Processing time:	32s
		Processing machine:	NL161

Cam

Industry:	Automotive	Cutting speed:	180m/min
Material:	HT250	Workpiece size:	30mm
Task:	A slender shaft	Processing time:	250s
		Processing machine:	NL253

Input shaft

Industry:	Automotive	Cutting speed:	200min
Material:	45#	Workpiece size:	22mm
Task:	High precision	Processing time:	38s
		Processing machine:	NL251

Plunger

Industry:	Automotive	Cutting speed:	100m/min
Material:	20#, 16MnCr5	Workpiece size:	10mm
Task:	Thin-walled workpiece High efficiency	Processing time:	12-16s
		Processing machine:	NL161

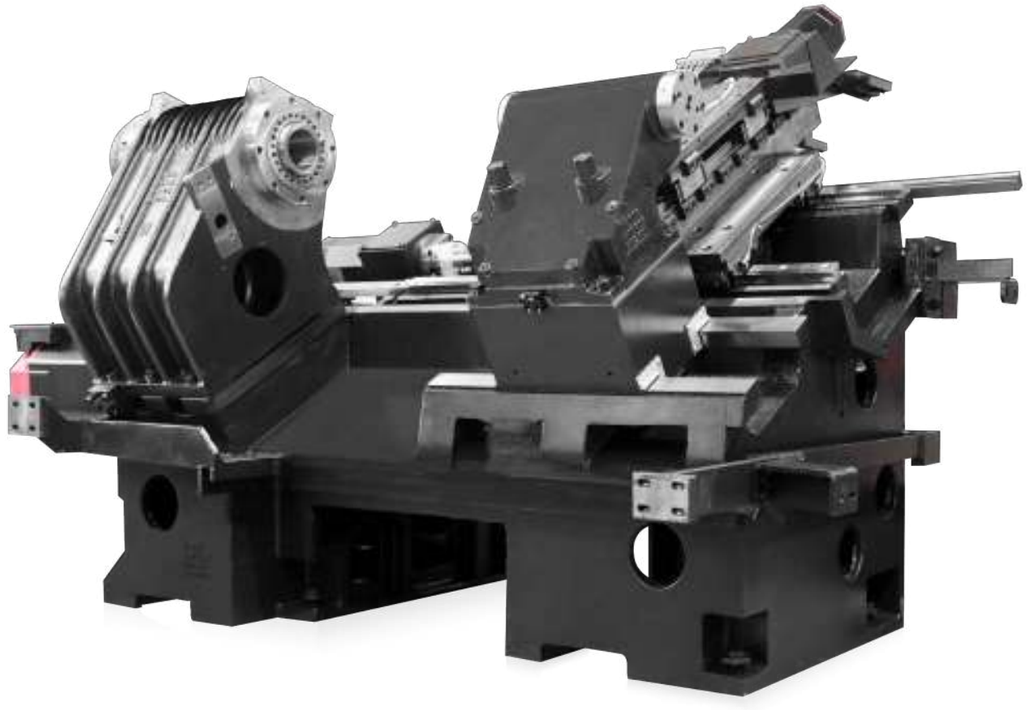
Note: The above data are all from actual use cases. The data listed above may not be reached, when the cutting conditions and environmental conditions are different.

NL Series-
Linear Guideway Slant bed CNC lathe

- Whole slant bed design offers high rigidity for heavier cutting and excellent chip removal.
- FEA structure analysis realize the correct layout of casting ribs to increase rigidity and lessen stress.
- The X/Z axis ball screw is pre-tensioned to reduce influence of temperature increase on the accuracy of the ball screw during machining. Fasten bolts are installed on both sides of the ball screw itself to increase the protection of the ball screw bearing. The servo motor is directly connected with the high speed and silent ball screw.
- X/Z axis utilize linear guideways to guarantee excellent dynamic characteristics, stable machining accuracy, high rapid traverse speeds and high processing efficiency.
- Tailstock adopts rectangular guideway, with excellent rigidity both up and down the layered structure. There are micro-adjustment devices between the upper and lower tiers. The tailstock center can be adjusted. The tailstock body can be moved manually or dragged by the slide board, and the quill is driven by hydraulic.
- Utilizes a high rigidity spindle box with lower noise, higher precision, better heat dissipation and and longer service life.
- World Class functional components, equipped with high class servo drivers and motors to realize reliable performance, excellent controllability, high indexing accuracy.
- The wide range of options: such as bar feeder, part catcher, larger hollow chuck, bigger spindle bore, programmable tailstock, tool measurement, hydraulic steady rest, etc.

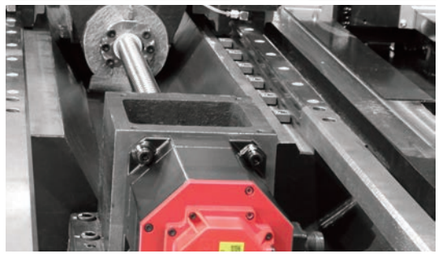
The main parameters

		NL161	NL251	NL252	NL253	NL403
Max. swing on bed	mm	Φ500	Φ550	Φ550	Φ550	Φ660
Max. cutting dia	mm	Φ320	Φ360	Φ360	Φ360	Φ500
Max. cutting length	mm	320	330	550	810	770
Motor power	kW	5.5/7.5	7.5/11	7.5/11	7.5/11	15/18.5
Spindle speed	r/min	6000	5000	5000	5000	3500



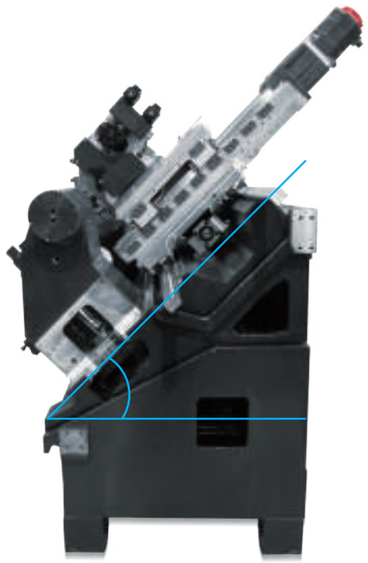
1 Linear Guideway

High-precision linear rolling guide way increase the speed of movement and improve cutting efficiency. The use of high class linear guide way realize high positioning accuracy and low wear. It can maintain accuracy for a long time, fully improve productivity and ensure high processing stability.



2 whole slant bed design

whole slant bed design to realize high stability of the CNC lathe and make chip removing easily and smoothly.

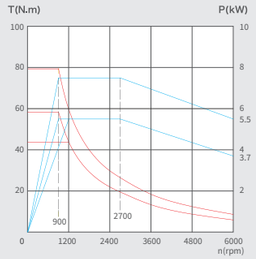


Spindle Power Torque Diagram

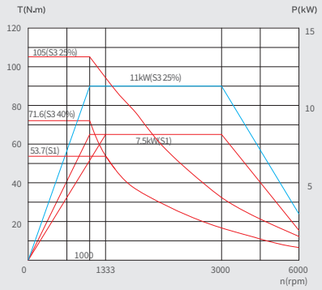
Tool Interference Diagram

(Unit: mm)

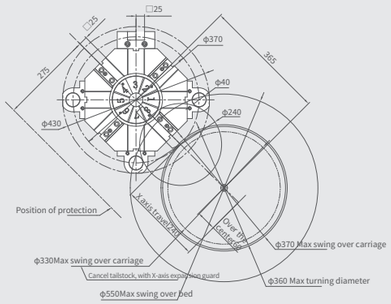
NL161



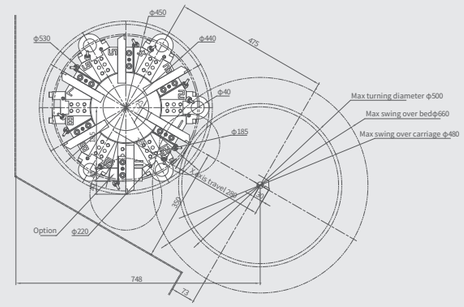
NL251/NL252



NL253



NL403/NL405



NL253

NL403/NL405

External Dimensions

NL161

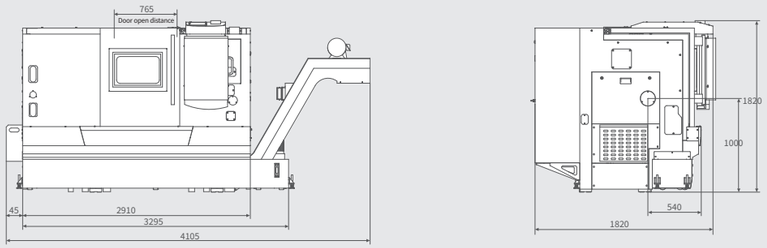
NL251/NL252

Models	A	B	C	D	E	F	G	H	I
NL251	3530	1815	1710	1000	2465	2180	165	460	605
NL252	3870	1815	1710	1000	2805	2520	165	460	725

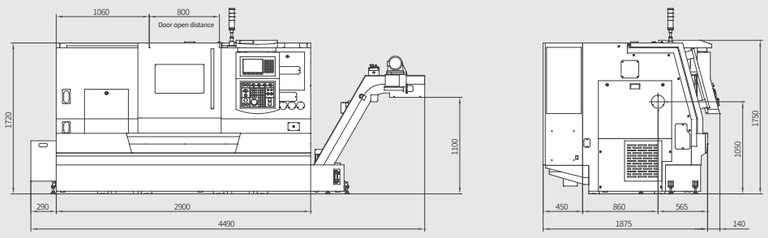
NL161

NL251/NL252

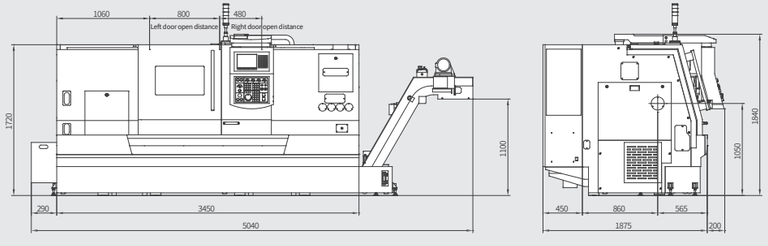
NL253



NL403



NL405



Item		Unit	NL161	NC3545	NL251	NL252	NL253	NL403	NL405
Max. swing over bed		mm	Φ500	Φ450	Φ550	Φ550	Φ550	Φ660	Φ660
Max. swing over saddle		mm	Φ300	Φ230	Φ330	Φ370	Φ370	Φ480	Φ480
Max. turning diameter		mm	Φ320	Φ350	Φ360	Φ360	Φ360	Φ500	Φ500
Max. turning length		mm	320	450	330	550	810	770	1250
Max. bar capacity		mm	Φ44	Φ66	Φ44	Φ44	Φ44	Φ74	Φ74
Max. spindle speed		rpm	6000	3000	5000	5000	5000	3500	3500
Spindle nose		ISO	A2-5	A2-6	A2-6	A2-6	A2-6	A2-8	A2-8
Spindle bore		mm	Φ56	Φ76	Φ56	Φ56	Φ56	Φ86	Φ86
Height from spindle center to ground		mm	915	940	1000	1000	1000	1050	1050
Tailstock quill diameter		mm	[Φ65]	[Φ75]	[Φ75]	Φ75	Φ100	Φ100	Φ100
Tailstock quill travel		mm	[80]	[80]	[80]	80	100	100	100
Tailstock quill taper		Morse	[4#(Live center)]	[4#(Live center)]	[4#(Live center)]	4#(Live center)	5#(Live center)	5#(Live center)	5#(Live center)
Travel X/Z		mm	180/350	200/455	240/330	240/550	240/830	280/800	280/1280
Rapid travel speed X/Z		m/min	30/30	24/30	24/30	24/30	24/30	24/30	24/30
Tool position		-	8（servo turret）	8（servo turret）	8（servo turret）	8（servo turret）	8	12（servo turret）	12（servo turret）
Turning tool shank size		mm	25×25	25×25	25×25	25×25	25×25	25×25	25×25
Boring tool holder diameter		mm	Φ40	Φ40	Φ40	Φ40	Φ40	Φ40	Φ40
Positioning accuracy	X	mm	0.006	0.006	0.006	0.006	0.006	0.008	0.008
	Z	mm	0.006	0.006	0.006	0.006	0.006	0.008	0.008
Repeatability accuracy	X	mm	0.004	0.004	0.004	0.004	0.004	0.004	0.004
	Z	mm	0.004	0.004	0.004	0.004	0.004	0.004	0.004
Machine power capacity		kVA	15	25	25	25	25	30	30
Machine dimension (L x W x H)		mm	1850×2250×1550	3660×1790×1720	3530×1710×1655	3870×1710×1655	4160×1820×1820	4490×1880×1750	5040×1880×1840
Machine weight		kg	2600	3400	3200	3800	4200	4100	4600
CNC system		-	NEWAY FANUC [SIEMENS]	GSK 988TA	NEWAY FANUC [SIEMENS]				
Spindle motor power		kW	5.5/7.5	11/15	7.5/11	7.5/11	7.5/11	15/18.5	15/18.5
Motor torque X/Z		N.m	7/7	9.55/9.55	7/7	7/7	7/7	11/11	11/11
Hydraulic chuck		inch	hollow6"	solid 8"	hollow8" [solid 8"/solid (hollow)10"]			solid 10" [hollow 10"/solid (hollow)12"]	
Automatic chip conveyor		-	Automatic rear chip conveyor	Automatic right chip conveyor [Automatic rear chip conveyor Automatic left chip conveyor]	Automatic right chip conveyor [Automatic rear chip conveyor]		Automatic right chip conveyor [Automatic rear chip conveyor Automatic left chip conveyor]		Automatic right chip conveyor [Automatic left chip conveyor]

Standard on Neway Lathes:
Installation kit, automatic lubricating device, standard tool attachment, foot pedal clamp and unclamp switch, hydraulic chuck and cylinder, soft jaws, hydraulic device, air gun, tri-color status lamp, chip cart, fully enclosed cabinet protection, waste oil collection device, LED lamp

Optional on Neway Lathes:
Hard jaws, special chuck, automatic tool measurement, steady rest, automatic door, additional tool attachment, air-blow mechanism, bar feeder, oil mist collector, oil skimmer, tailstock travel inspection, high-pressure coolant chip break, parts catcher.

[ ]Option

NL Series-
High performance Slant bed CNC lathe

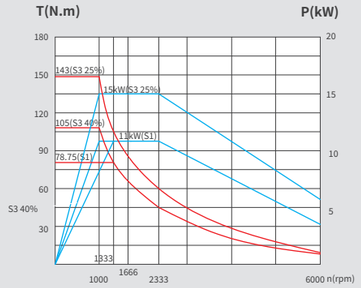
- The overall inclined bed structure, integral casting, rigidity improvement, roller/sliding guide design;
- The spindle large aperture design, high performance configuration, good rigidity, good stability;
- The servo motor specifications increased design, higher rapid travel speed and efficiency;
- Independent research and development of servo / high class 12 hydraulic turret, higher configuration and performance;
- The spindle motor specifications increased design, power, torque improvement, heavy cutting ability greatly improved.

The main parameters		NL251P	NL252P	NL253P
Max. swing on bed	mm	Φ550	Φ550	Φ550
Max. cutting dia	mm	Φ320	Φ320	Φ320
Max. cutting length	mm	330	550	810
Motor power	kW	11/15	11/15	11/15
Spindle speed	rpm	5000	4000	4000

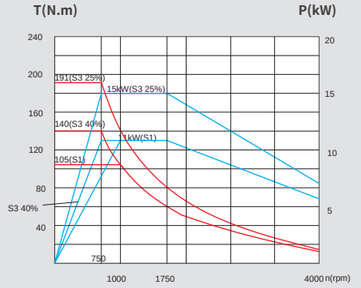
Spindle Power Torque Diagram | Tool Interference Diagram

(Unit: mm)

NL251P



NL252P



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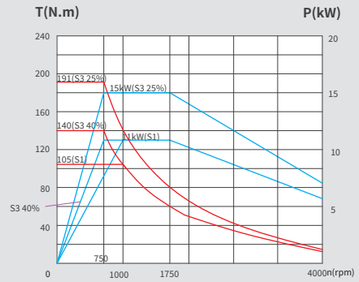
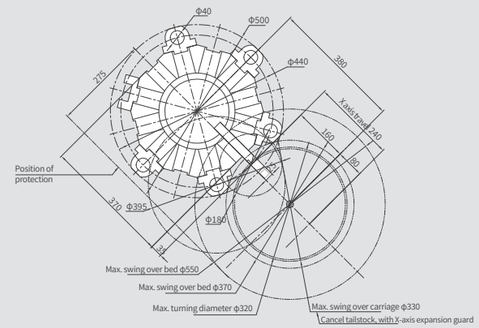


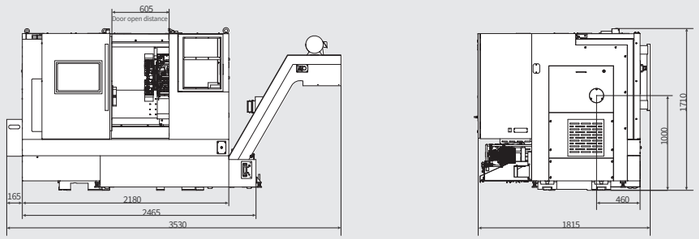
NL251P/NL252P/NL253P



External Dimensions

(Unit: mm)

NL251P



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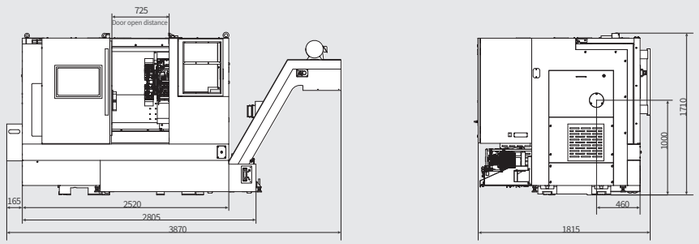

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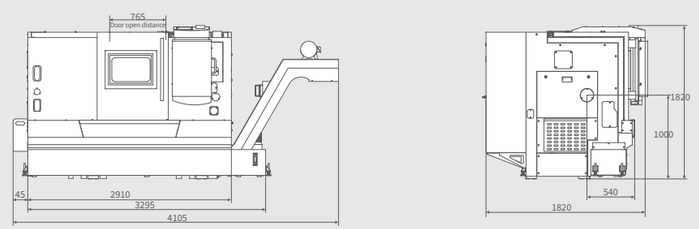


Item		Unit	NL251P	NL252P	NL253P
Max. swing over bed		mm	Φ550	Φ550	Φ550
Max. swing over saddle		mm	Φ330	Φ370	Φ370
Max. turning diameter		mm	Φ320	Φ320	Φ320
Max. turning length		mm	330	550	810
Max. bar capacity		mm	Φ44	Φ66	Φ66
Max. spindle speed		rpm	5000	4000	4000
Spindle nose		ISO	A2-6	A2-6	A2-6
Spindle bore		mm	Φ56	Φ76	Φ76
Height from spindle center to ground		mm	1000	1000	1000
Tailstock quill diameter		mm	[Φ75]	Φ75	Φ100
Tailstock quill travel		mm	[80]	80	100
Tailstock quill taper		Morse	[4#(Live center)]	4#(Live center)	5#（Live center）
Travel X/Z		mm	240/330	240/550	240/830
Rapid travel speed X/Z		m/min	30/36	30/36	30/36
Tool position		-	12（servo turret）	12（servo turret）	12（servo turret）
Turning tool shank size		mm	25×25	25×25	25×25
Boring tool holder diameter		mm	Φ40	Φ40	Φ40
Positioning accuracy	X	mm	0.006	0.006	0.006
	Z	mm	0.006	0.006	0.006
Repeatability accuracy	X	mm	0.004	0.004	0.004
	Z	mm	0.004	0.004	0.004
Machine power capacity		kVA	25	25	25
Machine dimension (L x W x H)		mm	3530×1710×1655	3870×1710×1655	4105×1820×1820
Machine weight		kg	3200	3800	4200
CNC system		-	NEWAY FANUC [SIEMENS]		
Spindle motor power		kW	11/15	11/15	11/15
Motor torque X/Z		N.m	11/11	11/11	11/11
Hydraulic chuck		inch	hollow8" [solid 8"/solid (hollow)10"]		
Automatic chip conveyor		-	Automatic right chip conveyor [Automatic rear chip conveyor]		Automatic right chip conveyor [Automatic rear chip conveyor Automatic left chip conveyor]

Standard on Neway lathes:
Installation kit, automatic lubricating device, standard tool attachment, foot pedal clamp and unclamp switch, hydraulic chuck and cylinder, soft jaws, hydraulic device, air gun, tri-color status lamp, chip cart, fully enclosed cabinet protection, waste oil collection device, LED lamp

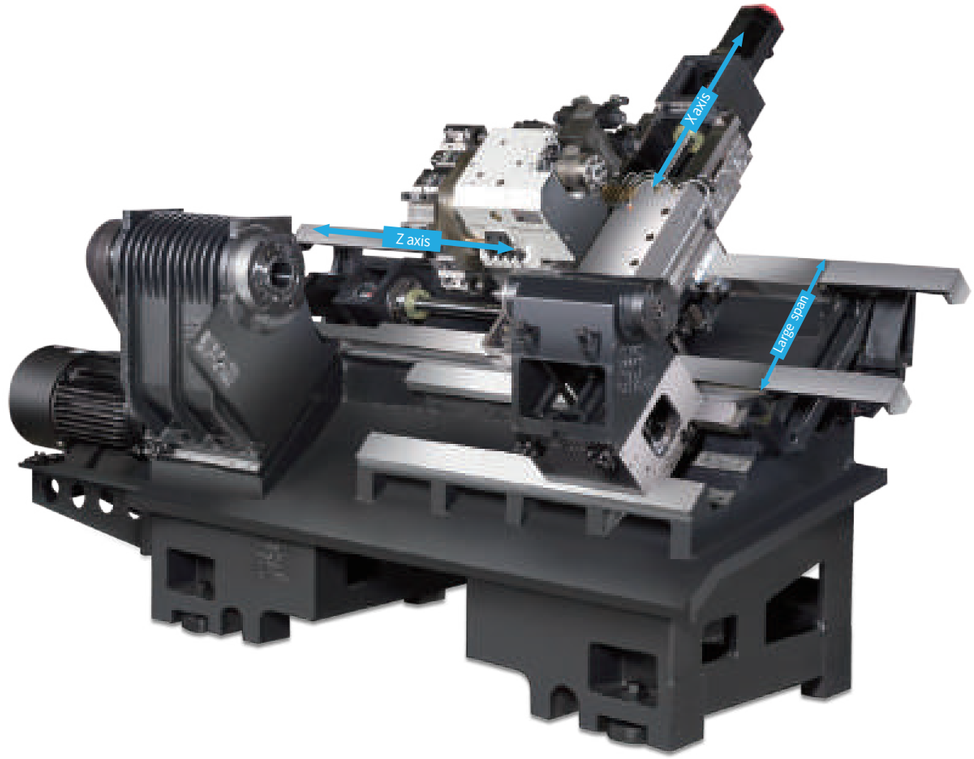
Optional on Neway lathes:
Hard jaws, special chuck, automatic tool measurement, steady rest, automatic door, additional tool attachment, air-blow mechanism, bar feeder, oil mist collector, oil skimmer, tailstock travel inspection, high-pressure coolant chip break, parts catcher.

[ ]Option

NL Series-
Box Guideway Slant bed CNC lathe

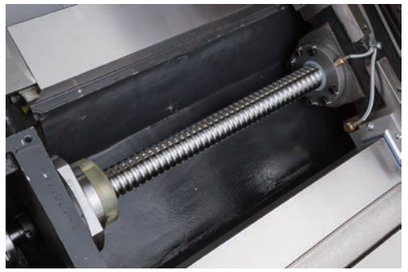
- Whole slant bed design offers high rigidity for heavier cutting and excellent chip removal. The X/Z axis ball screw is pre-tensioned to reduce influence of temperature increase on the accuracy of the ball screw during machining. Fasten bolts are installed on both sides of the ball screw itself to increase the protection of the ball screw bearing. The servo motor is directly connected to drive the high speed and silent ball screw.
- X/Z axis is box-way design with HRC48 hardness surface through heat treatment, bigger guideway span, higher rigidity, better torsional and shock resistance, stable machining accuracy. The box ways are equipped with high class wear resistant turcite to realize lower friction, smooth movement and good dynamic characteristics.
- Tailstock adopts rectangular guideway, with excellent rigidity both up and down the layered structure. There are micro-adjustment devices between the upper and lower tiers. The tailstock center height can be adjusted. The tailstock body can be moved manually or dragged by the slide board, and the quill is driven by hydraulic.
- Utilizes a high rigidity spindle box with lower noise, higher precision, better heat dissipation and and longer service life.
- The wide range of options: such as bar feeder, parts catcher, larger hollow chuck, bigger spindle bore, programmable tailstock, tool measurement, hydraulic steady rest, etc.

The main parameters		NL634	NL634Z	NL635	NL635Z
Max. swing over bed	mm	Φ770	Φ770	Φ770	Φ770
Max. cutting dia	mm	Φ630	Φ630	Φ630	Φ630
Max. cutting length	mm	1000	1000	1500	1500
Motor power	kW	22/26	22/26	22/26	22/26
Spindle speed	rpm	2000	1000	2000	1000



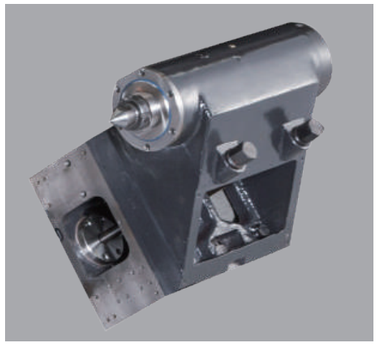
1 Box-way

Box-ways are used to provide a large contact area and large-span layout to realize excellent rigidity. The X-axis and Z-axis of this type of machine are all rectangular-shaped box-way, all of which are carefully scraped by experienced expert technicians. Special attention is paid to the surface matching and finishing. After final quality acceptance, Neway machines achieve high precision level.



2 Tailstock

The tailstock is center structure. Tailstock quill is driven through hydraulic and controlled by CNC controller. The tailstock adopts a rectangular guideway bed saddle. The tail stock body is dragged by the slide board (drag pin on the tailstock seat connect the tailstock body and the slide board), which has excellent accuracy and precise movement.

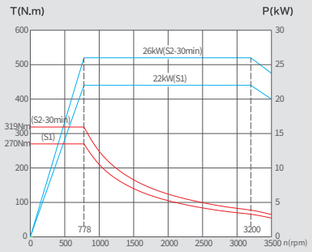


3 X/Z axis Bed Layout Design

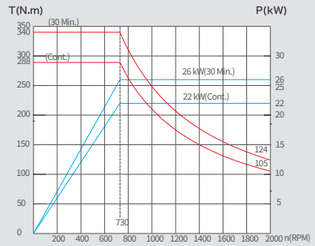
The bed are made from world class Meehanite castings. The heat treatment make the hardness reach HRC48. This treatment offers the full span with enhanced rigidity, longer life, good vibration absorption and higher deflection resistance.

Spindle Power Torque Diagram

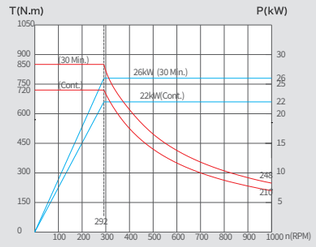
NL502/NL504



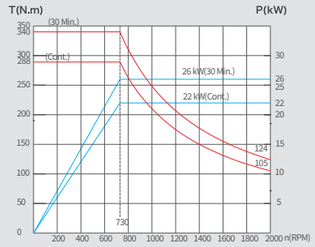
NL634/NL635



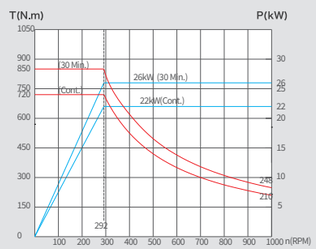
NL634Z/NL635Z



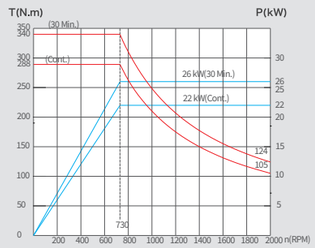
NL636



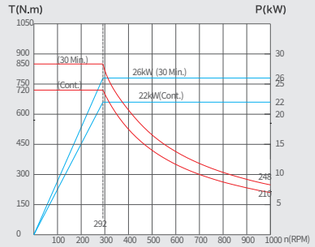
NL636Z



NL638

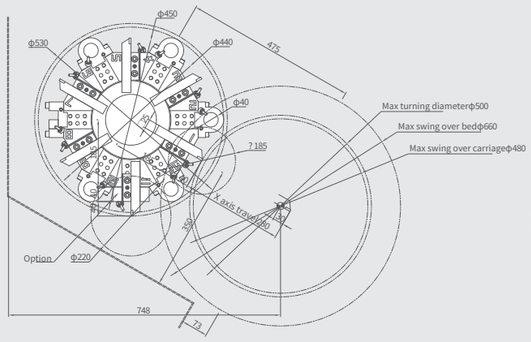


NL638Z

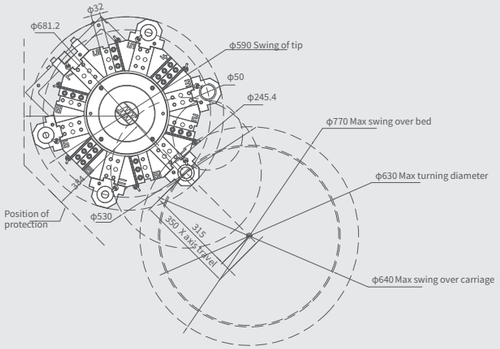


Tool Interference Diagram

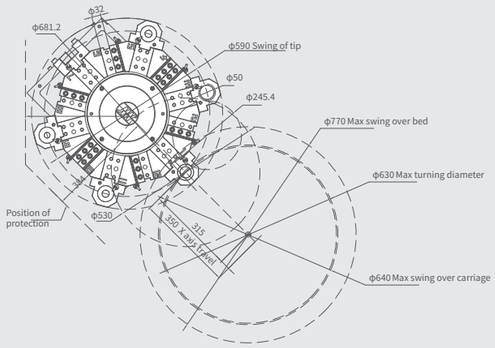
NL502/NL504



NL634/Z, NL635/Z



NL636/Z



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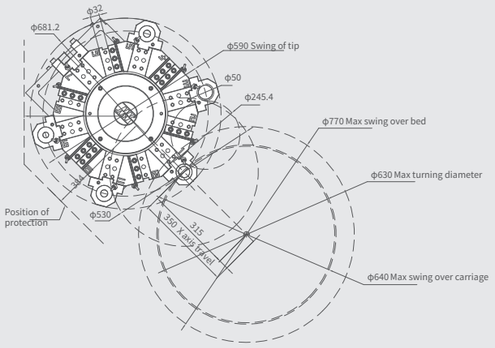
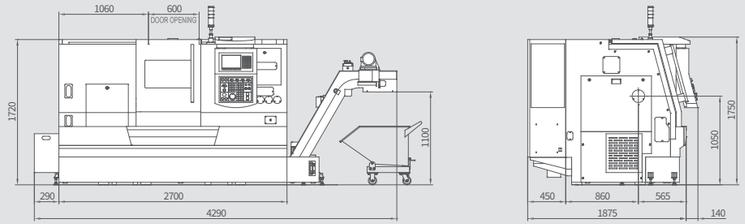


External Dimensions

(Unit:mm)

NL502



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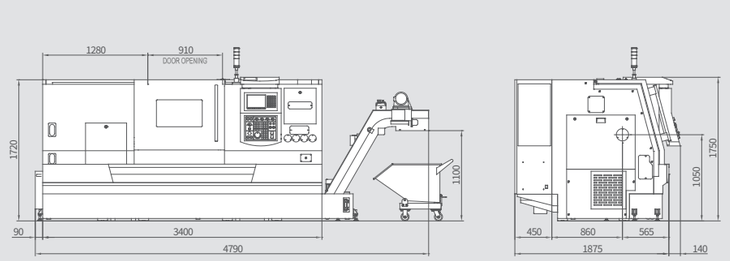
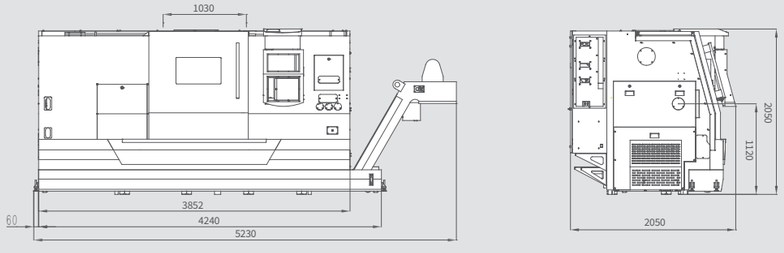
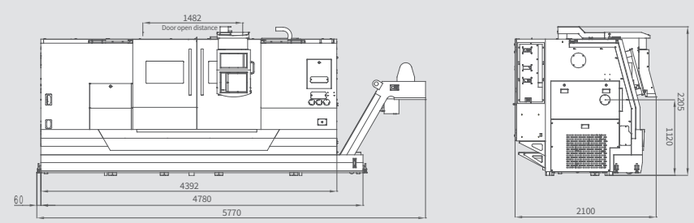


NL634/Z



NL635/Z



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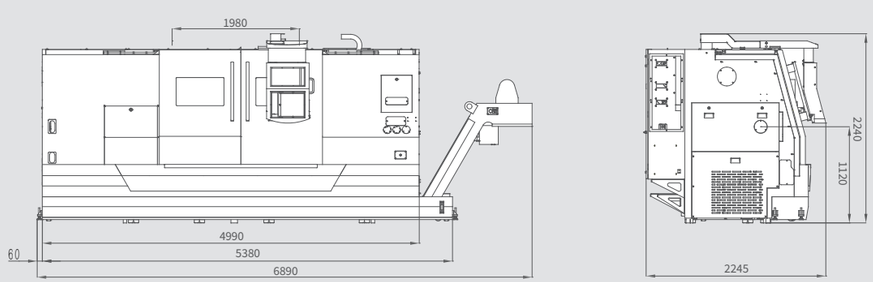
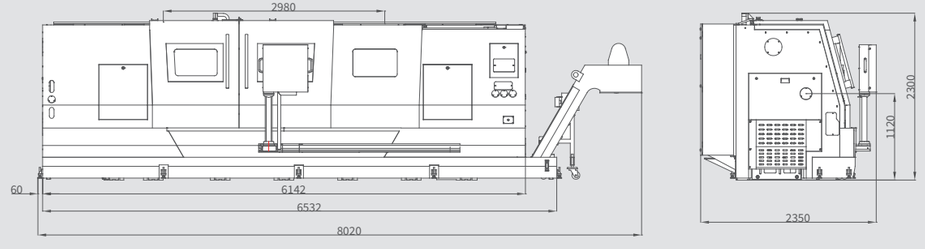


NL638/Z



Item			Unit	NL502	NL504	NL634	NL634Z	NL635	NL635Z	NL636	NL636Z	NL638	NL638Z
Processing range	Max. swing over bed		mm	Φ660	Φ660	Φ770	Φ770	Φ770	Φ770	Φ770	Φ770	Φ770	Φ770
	Max. swing over saddle		mm	Φ480	Φ480	Φ640	Φ640	Φ640	Φ640	Φ640	Φ640	Φ640	Φ640
	Max. turning diameter		mm	Φ500	Φ500	Φ630	Φ630	Φ630	Φ630	Φ630	Φ630	Φ630	Φ630
	Max. turning length		mm	570	1070	1000	1000	1500	1500	2000	2000	3000	3000
	Max. bar capacity		mm	Φ74	Φ74	Φ74	Φ89	Φ74	Φ89	Φ89	Φ89	Φ89	Φ89
Spindle	Max. spindle speed		rpm	3500	3500	2000	1000	2000	1000	2000	1000	2000	1000
	Spindle nose		ISO	A2-8	A2-8	A2-8	A2-11	A2-8	A2-11	A2-11	A2-11	A2-11	A2-11
	Spindle bore		mm	Φ86	Φ86	Φ92	Φ106	Φ92	Φ106	Φ106	Φ106	Φ106	Φ106
	Height from spindle center to ground		mm	1050	1050	1120	1120	1120	1120	1120	1120	1120	1120
Hydraulic tailstock	Tailstock quill diameter		mm	Φ100	Φ100	Φ130	Φ130	Φ130	Φ130	Φ130	Φ130	Φ130	Φ130
	Tailstock quill travel		mm	100	100	120	120	120	120	120	120	120	120
	Tailstock quill taper		Morse	5#（Live center）	5#（Live center）	5#	5#	5#	5#	5#	5#	5#	5#
Axis X/Z	Travel X/Z		mm	280/600	280/1100	350/1100	350/1100	350/1100	350/1100	350/2100	350/2100	350/3100	350/3100
	Rapid travel speed X/Z		m/min	16/20	16/20	12/16	12/16	12/16	12/16	12/16	12/16	12/16	12/16
Hydraulic turret	Tool position		-	12（servo turret）	12（servo turret）	12（servo turret）	12（servo turret）	12（servo turret）	12（servo turret）	12（servo turret）	12（servo turret）	12（servo turret）	12（servo turret）
	Turning tool shank size		mm	25×25	25×25	32×32	32×32	32×32	32×32	32×32	32×32	32×32	32×32
	Boring tool holder diameter		mm	Φ40	Φ40	Φ50	Φ50	Φ50	Φ50	Φ50	Φ50	Φ50	Φ50
Machine accuracy	Positioning accuracy	X	mm	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
		Z	mm	0.01	0.011	0.011	0.011	0.014	0.014	0.021	0.021	0.031	0.031
	Repeatability accuracy	X	mm	0.005	0.005	0.006	0.006	0.006	0.006	0.007	0.007	0.007	0.007
		Z	mm	0.007	0.007	0.008	0.008	0.008	0.008	0.018	0.018	0.022	0.022
Machine power capacity			kVA	35	35	35	35	35	35	35	35	35	35
Machine dimension (L x W x H)			mm	4290×1880×1750	4790×1880×1750	5230×2050×2050	5230×2050×2050	5770×2100×2205	5770×2100×2205	6890×2245×2240	6890×2245×2240	8020×2350×2300	8020×2350×2300
Machine weight			kg	4000	4500	7000	7100	7500	7600	8200	8300	9300	9400
CNC system			-	NEWAY FANUC						NEWAY FANUC			
Spindle motor power			kW	22/26	22/26	22/26	22/26	22/26	22/26	22/26	22/26	22/26	22/26
Motor torque X/Z			N.m	11/11	11/11	20/20	20/20	20/20	20/20	20/20	20/20	20/36	20/36
Hydraulic chuck			inch	solid 10" [hollow 10"]	solid 10" [hollow 10"]	solid 12" [hollow 12"]	solid 15" [hollow 15"]	solid 12" [hollow 12"]	solid 15" [hollow 15"]	solid 12" [hollow 12"]	solid 15" [hollow 15"]	solid 12" [hollow 12"]	solid 15" [hollow 15"]
Automatic chip conveyor			-	Automatic right chip conveyor[Automatic left chip conveyor]						Automatic right chip conveyor[Automatic left chip conveyor]			

Standard on Neway Lathes:
Coolant system, installation kit, automatic lubricating device, standard tool attachment, foot pedal clamp and unclamp switch, hydraulic chuck and cylinder, soft jaws, hydraulic device, air gun, tri-color status lamp, chip cart, fully enclosed cabinet protection, waste oil collection device, LED lamp

Optional on Neway Lathes:
Hard jaws, special chuck, automatic tool measurement, steady rest, automatic door, additional tool attachment, air-blow mechanism, bar feeder, oil mist collector, oil skimmer, tailstock travel inspection, high-pressure coolant chip break, parts catcher.

[ ]Option

NL Series-
Horizontal Turning and Milling Center

- The horizontal turning center is with three-axis interpolation, semi-closed-loop control, C-axis indexing function and living turret to finish the milling, drilling, tapping, turning and many other processing.
- Whole slant bed design, with advantages of compact structure, high rigidity, smooth chip removal and ease operation.
- NL turning and milling centers are with fully enclosed protection, automatic chip removal, automatic lubrication, automatic cooling, to realize easier maintenance and higher performance.
- Live tools are used for rotary parts with complex geometry, various sizes, and high precision requirements, which can finish axial milling, radial groove, plane milling, drilling, reaming, tapping, etc.

The main parameters		NL161M	NL251M	NL252M	NL253M
Max. swing over bed	mm	Φ500	Φ550	Φ550	Φ550
Max. cutting dia	mm	Φ240	Φ290	Φ290	Φ290
Max. cutting length	mm	320	260	480	725
Motor power	kW	5.5/7.5	11/15	11/15	11/15
Spindle speed	rpm	6000	5000	5000	5000

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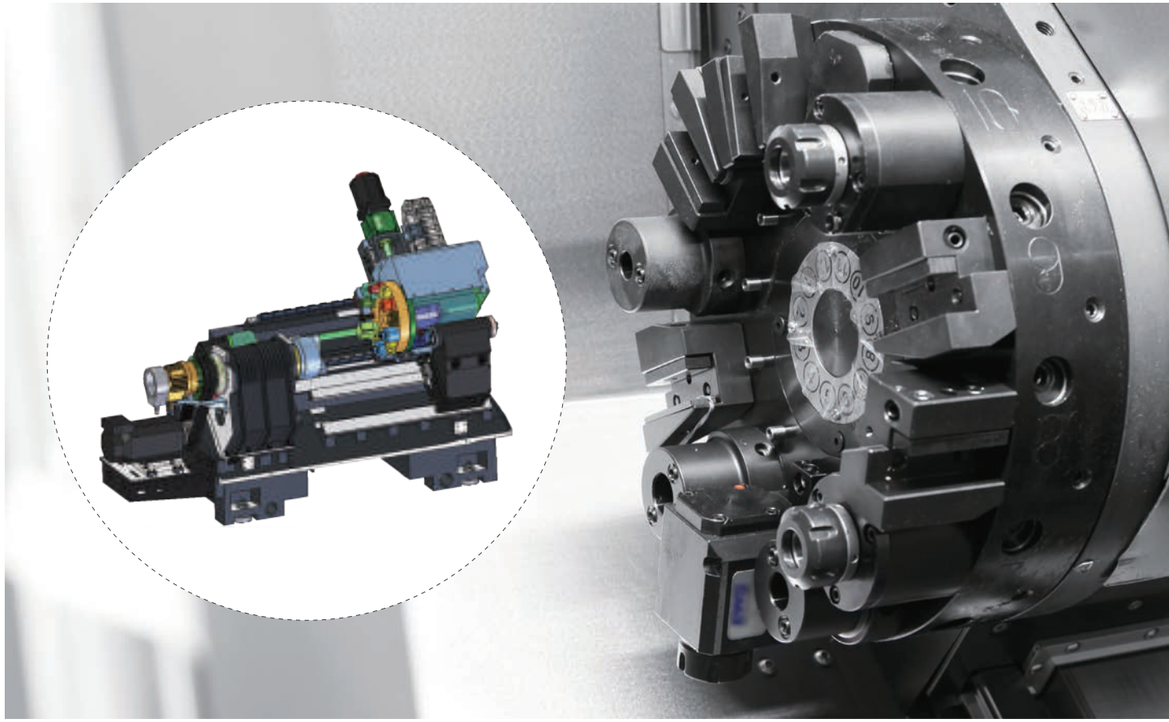
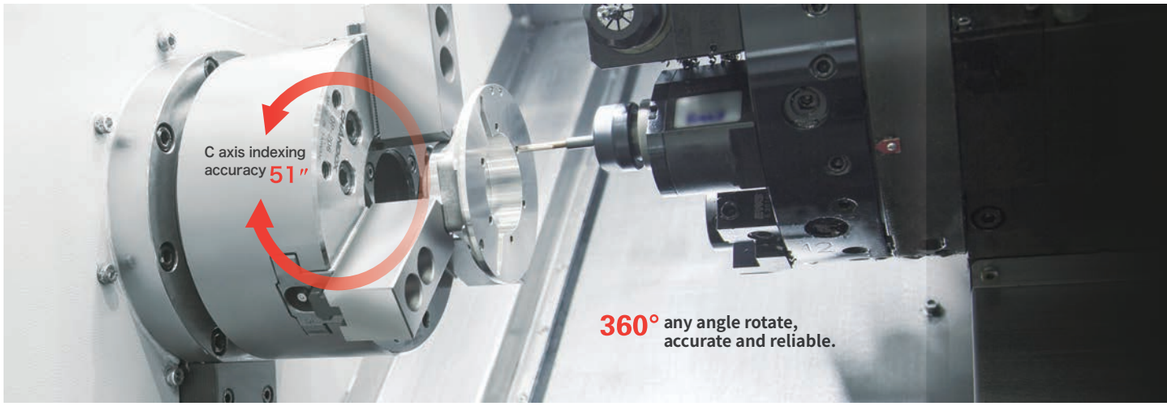




1 Live Tool Driven Turret

Equipped with the high-performancelive turret, with milling and drilling functions.

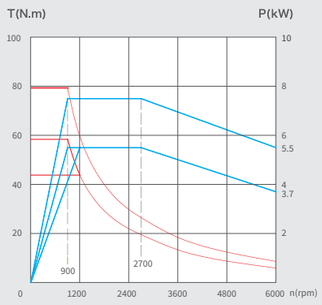
2 C Axis Index Positioning Function

C-axis and live turret can satisfy multiple operations such as turning, milling, drilling and tapping in a single set up with high efficiency and high precision.

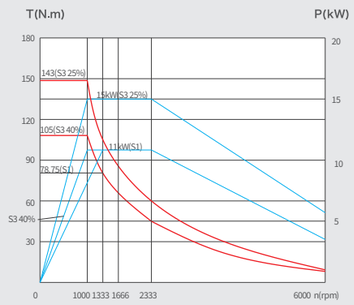
Spindle Power Torque Diagram

(Unit: mm)

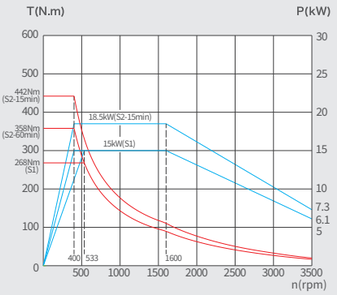
NL161M



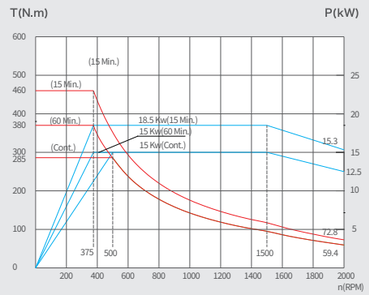
NL251M/ NL252M/NL253M



NL403M/NL405M



NL634M/NL635M/NL636M/NL638M



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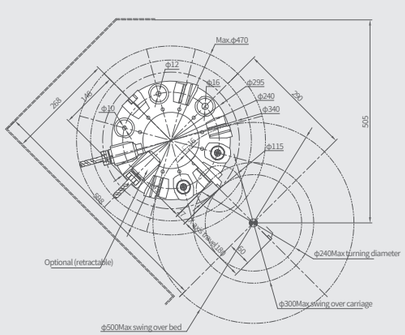
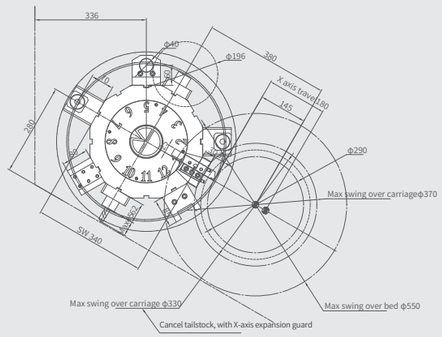
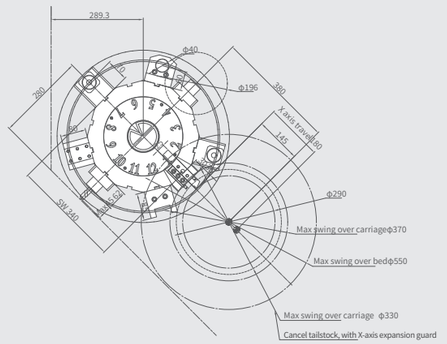


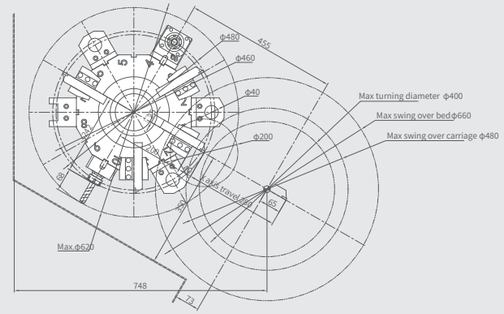
NL251M/NL252M



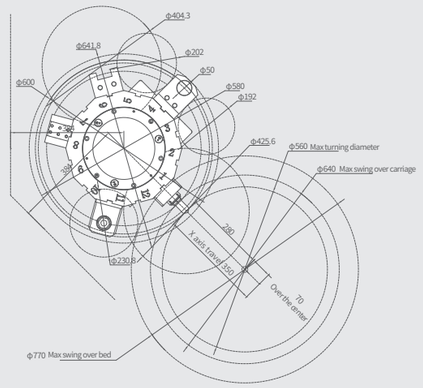
NL253M



NL403M/NL405M



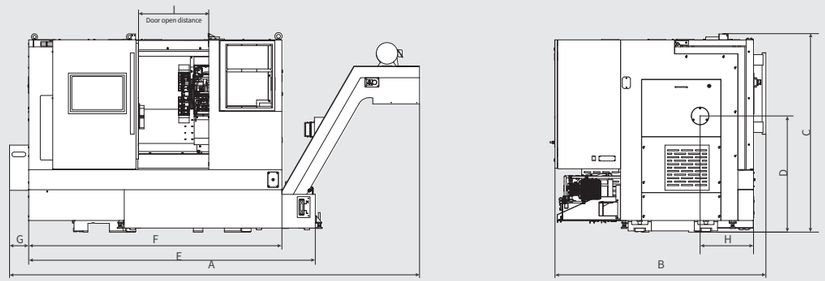
NL634M/NL635M/NL636M/NL638M



External Dimensions

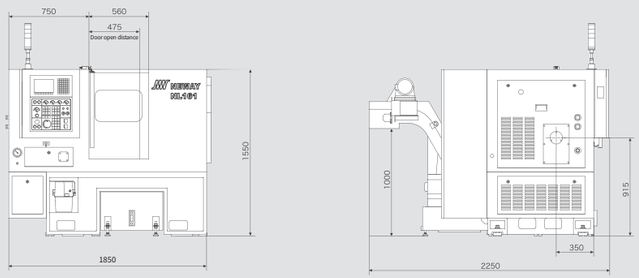
(Unit: mm)

NL251M/NL252M

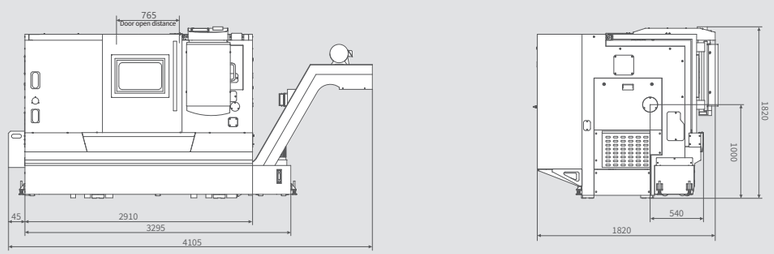


Models	A	B	C	D	E	F	G	H	I
NL251M	3530	1815	1710	1000	2465	2180	165	460	605
NL252M	3870	1815	1710	1000	2805	2520	165	460	725

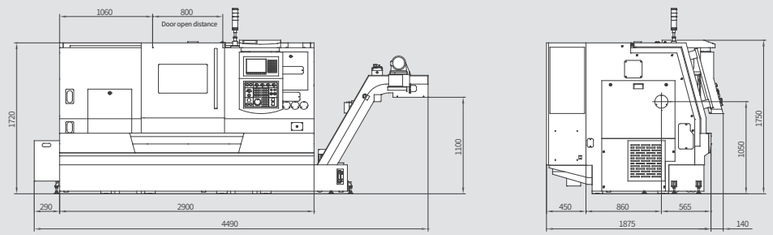
NL161M



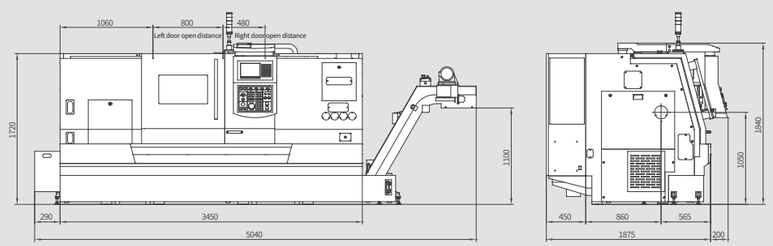
NL253M



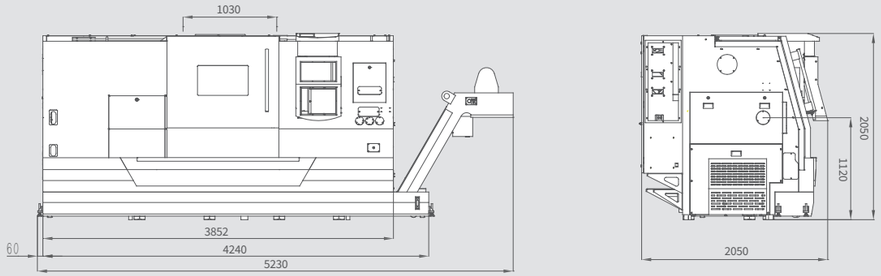
NL403M



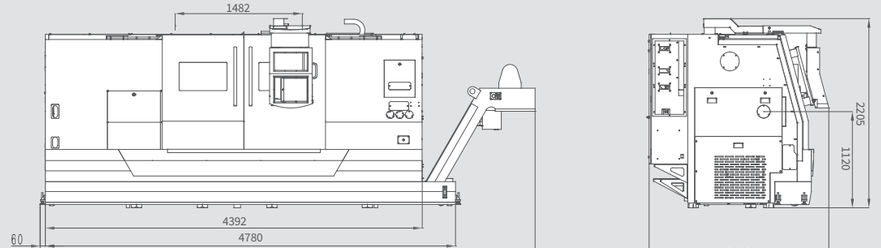
NL405M



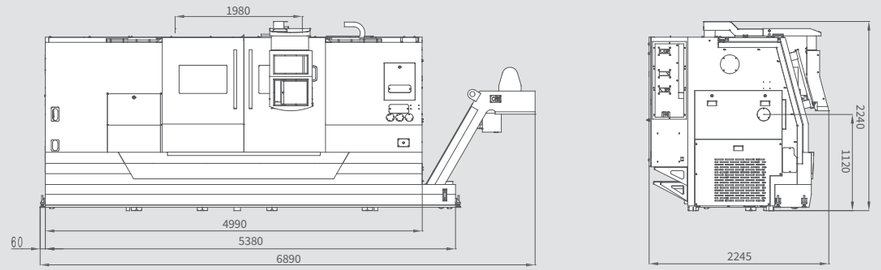
NL634M



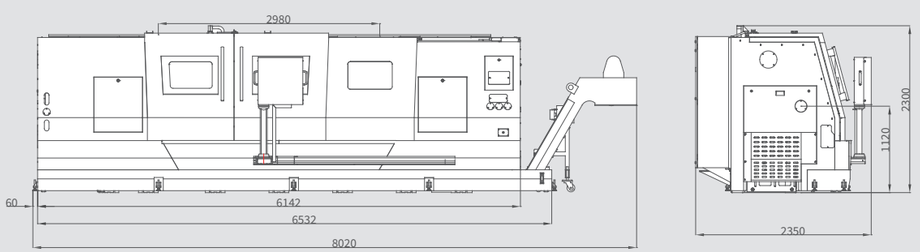
NL635M



NL636M



NL638M



Item			Unit	NL161M	NL251M	NL252M	NL253M	NL403M	NL405M	NL634M	NL635M	NL636M	NL638M
Processing range	Max. swing over bed		mm	Φ500	Φ550	Φ550	Φ550	Φ660	Φ660	Φ770	Φ770	Φ770	Φ770
	Max. swing over saddle		mm	Φ300	Φ330	Φ370	Φ370	Φ480	Φ480	Φ640	Φ640	Φ640	Φ640
	Max. turning diameter		mm	Φ240	Φ290	Φ290	Φ290	Φ400	Φ400	Φ560	Φ560	Φ560	Φ560
	Max. turning length		mm	320	260	480	725	700	1180	1000	1500	2000	3000
	Max. bar capacity		mm	Φ44	Φ44	Φ44	Φ44	Φ74	Φ74	Φ77	Φ77	Φ106	Φ106
Spindle	Max. spindle speed		rpm	6000	5000	5000	5000	3500	3500	2000	2000	2000	2000
	Spindle nose		ISO	A2-5	A2-6	A2-6	A2-6	A2-8	A2-8	A2-8	A2-8	A2-11	A2-11
	Spindle bore		mm	Φ56	Φ56	Φ56	Φ56	Φ86	Φ86	Φ92	Φ92	Φ106	Φ106
	Height from spindle center to ground		mm	915	1000	1000	1000	1050	1050	1120	1120	1120	1120
Hydraulic tailstock	Tailstock quill		mm	-	[Φ75]	Φ75	Φ100	Φ100	Φ100	Φ130	Φ130	Φ130	Φ130
	Tailstock quill travel		mm	-	[80]	80	100	100	100	120	120	120	120
	Tailstock quill taper		Morse	-	[4#(Live center）]	4#(Live center)	5#(Live center)	5#(Live center)	5#(Live center)	5#	5#	5#	5#
Axis X/Z	Travel X/Z		mm	180/350	180/330	180/550	180/830	280/800	280/1280	350/1100	350/1600	350/2100	350/3100
	Rapid travel speed X/Z		m/min	30/30	24/30	24/30	24/30	24/30	24/30	12/16	12/16	12/16	12/10
Living turret	Tool position		mm	12(VDI 20)	12（BMT55)	12（BMT55)	12（BMT55)	12(BMT55)	12(BMT55)	12（BMT65)	12（BMT65)	12（BMT65)	12（BMT65)
	Max. live tool speed		rpm	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
	Turning tool shank size		mm	16×16	25×25	25×25	25×25	25×25	25×25	25×25	25×25	25×25	25×25
	Max. boring tool holder		mm	Φ16	Φ40	Φ40	Φ40	Φ40	Φ40	Φ50	Φ50	Φ50	Φ50
	Max. drilling capacity		mm	Φ12×0.14	Φ14×0.15	Φ14×0.15	Φ14×0.15	Φ14×0.16	Φ14×0.16	Φ16×0.2	Φ16×0.2	Φ16×0.2	Φ16×0.2
	Max. tapping capacity		mm	M8×1.5/M14×1	M10×1.5/M24×1	M10×1.5/M24×1	M10×1.5/M24×1	M10×1.5/M24×1	M10×1.5/M24×1	M14×2/M20×1.5	M14×2/M20×1.5	M14×2/M20×1.5	M14×2/M20×1.5
	Max. milling capacity		mm	Φ12×8×45	Φ16×12×40	Φ16×12×40	Φ16×12×40	Φ16×12×40	Φ16×12×40	Φ20×12×40	Φ20×12×40	Φ20×12×40	Φ20×12×40
Machine accuracy	Positioning accuracy	X/Z/C	mm	0.006/0.006/51”	00.006/0.006/51”	0.008/0.008/51”	0.008/0.008/51”	0.008/0.008/51”	0.008/0.008/51”	0.010/0.011/51”	0.010/0.014/51”	0.010/0.020/51”	0.010/0.031/51”
	Repeatability accuracy	X/Z/C	mm	0.004/0.004/20”	0.004/0.004/20”	0.004/0.004/20”	0.004/0.004/20”	0.004/0.004/20”	0.004/0.004/20”	0.006/0.008/20”	0.006/0.008/20”	0.007/0.018/20”	0.007/0.022/20”
Other	Machine power capacity		kVA	20	25	40	40	40	40	55	55	55	55
	Machine dimension (L x W x H)		mm	1850×2250×1550	3530×1710×1655	3870×1710×1655	4160×1820×1820	4490×1880×1750	5040×1880×1840	5230×2050×2050	5770×2100×2205	6890×2245×2240	8020×2350×2300
	Machine weight		kg	2600	3200	3800	4200	4100	4600	7000	7500	8200	9300
	CNC system			NEWAY FANUC[SIEMENS]						NEWAY FANUC[SIEMENS]			
	Spindle motor power		kW	5.5/7.5	11/15	11/15	11/15	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5
	Motor torque X/Z		N.m	7/7	11/11	11/11	11/11	11/11	11/11	11/11	20/20	20/20	20/36
	Hydraulic chuck		inch	hollow 6" [solid 6"/solid(hollow)8"]	Hollow 8" [Solid8"]		hollow 8" [solid 8"/solid(hollow)10"]	Solid 10" [Hollow 10"/solid(hollow)12"]		Solid 12" [Hollow12"]			
	Automatic chip conveyor		-	Automatic rear chip conveyor	Automatic right chip conveyor [Automatic left chip conveyor]		Automatic right chip conveyor [Automatic left chip conveyor/ Automatic rear chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor/ Automatic rear chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]				

Standard on Neway Lathes:
Hard jaws, special chuck, automatic tool measurement, steady rest, automatic door, additional tool attachment, air-blow mechanism, bar feeder, oil mist collector, oil skimmer, tailstock travel inspection, high-pressure coolant chip break, parts catcher.

Optional on Neway Lathes:
Hard jaws, special chuck, automatic tool measurement, steady rest, automatic door, additional tool attachment, air-blow mechanism, bar feeder, oil mist collector, oil skimmer, tailstock travel inspection, high-pressure coolant chip break, parts catcher.

[ ]Option

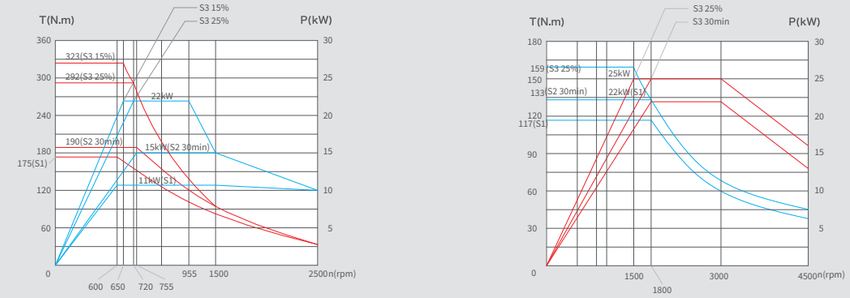
NL Series-
Multi-axis horizontal turning center

- Whole slant bed design offers high rigidity for heavier cutting and excellent chip removal.
- FEA structure analysis realize the perfect layout of casting ribs to increase rigidity and lessen stress.
- The X/Z axis high speed and silent ball screw is pre-tensioned to reduce influence of temperature increase on the accuracy of the ball screw during machining.
- X/Z axis utilize linear guideways to guarantee excellent dynamic characteristics, stable machining accuracy, high rapid traverse speeds and high processing efficiency.
- This series turning center can realize X, Y, Z, C four axis interpolation, which can finish eccentric hole processing and wide slot milling.
- NLT322SY is equipped with double electrical spindle, double living turret (upper one turret and downside one turret) to realize high production capacity.
- NL301Y and NL302Y can be quipped with the servo tail stock as option. Easy control and high efficiency.

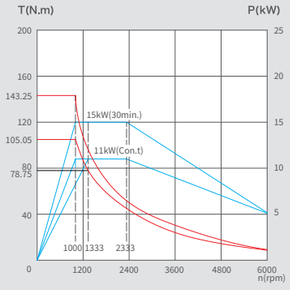
Spindle Power Torque Diagram

(Unit: mm)

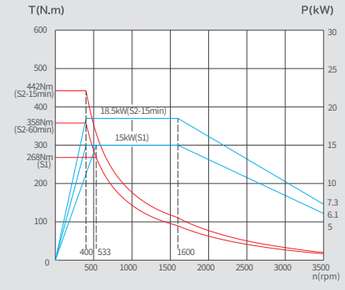
NLT322SY



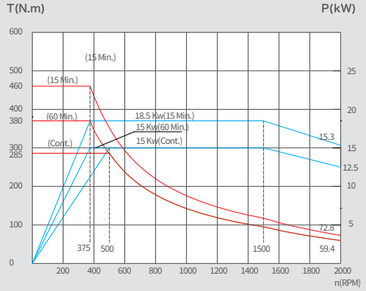
NL301Y/NL302Y



NL403Y/NL405Y

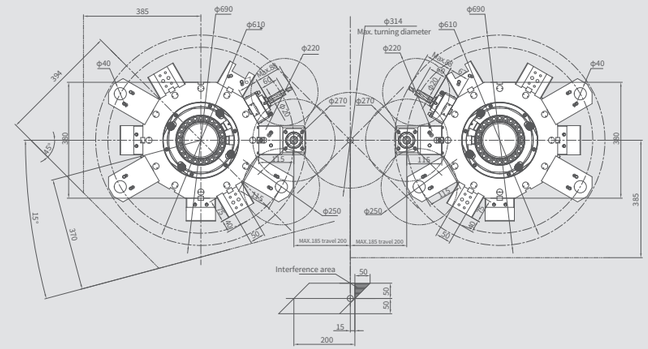


NL634Y/NL635Y/NL636Y/NL638Y

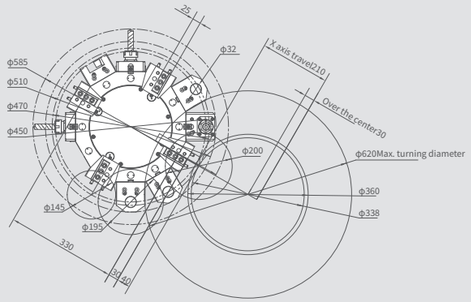


Tool Interference Diagram

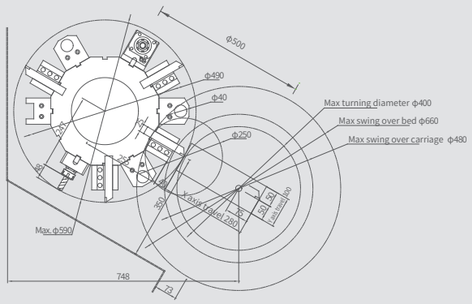
NLT322SY



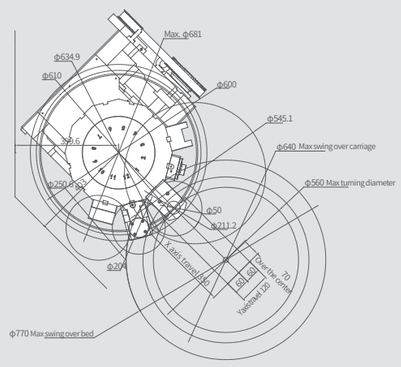
NL301Y/NL302Y



NL403Y/NL405Y



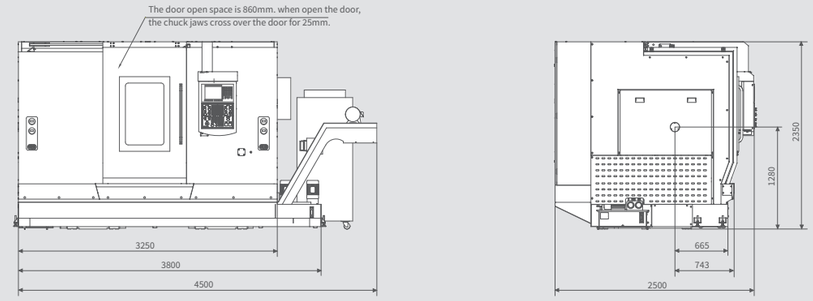
NL634Y/NL635Y/NL636Y/NL638Y/



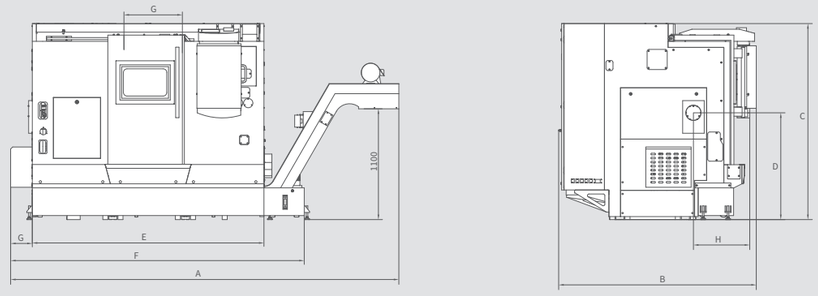
External Dimensions

(Unit: mm)

NLT322SY

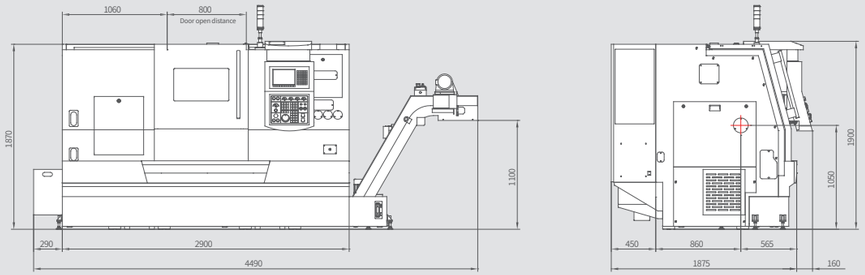


NL301Y/NL302Y

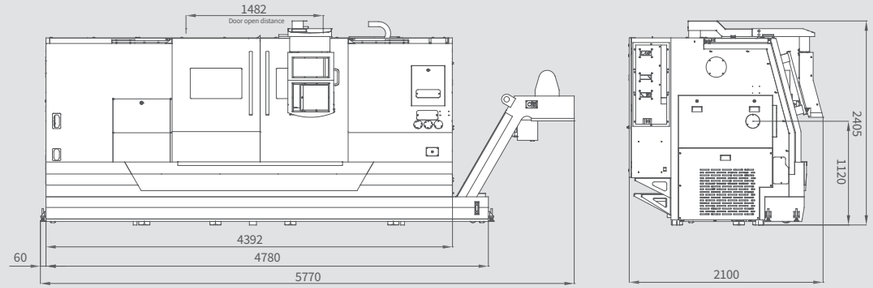


Models	A	B	C	D	E	F	G	H	I
NL301Y	3855	1940	1950	1060	2915	2300	215	460	580
NL302Y	4105	1940	1950	1060	3165	2700	65	460	730

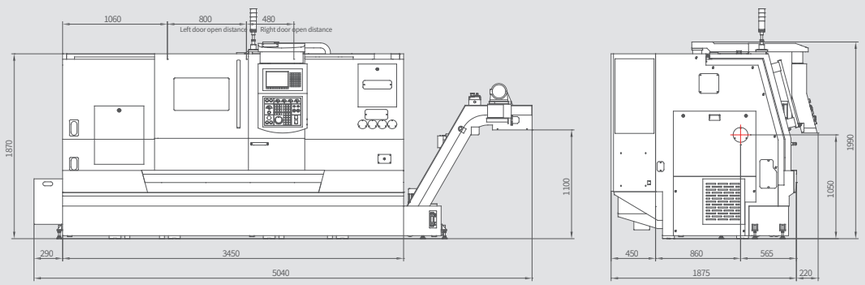
NL403Y



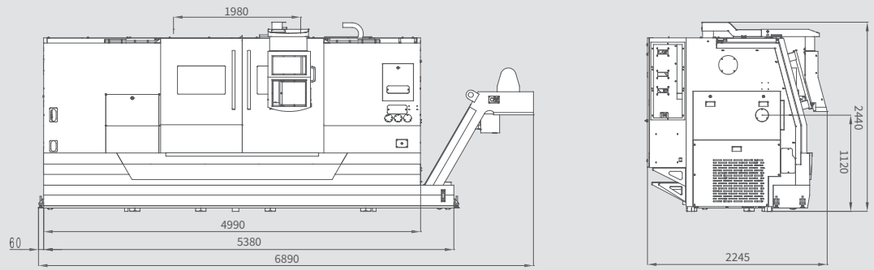
NL635Y



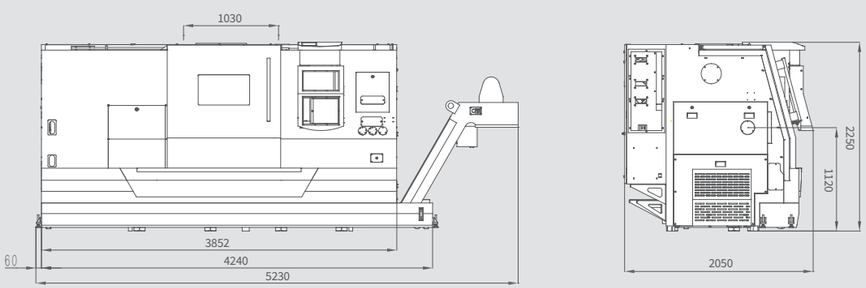
NL405Y



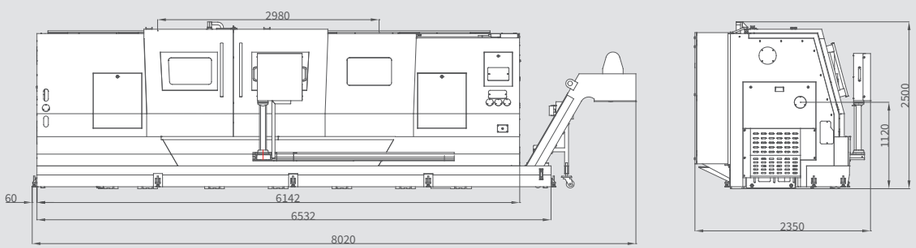
NL636Y



NL634Y



NL638Y



Item			Unit	NLT322SY	NL301Y	NL302Y	NL403Y	NL405Y	NL634Y	NL635Y	NL636Y	NL638Y
Processing range	Max. turning diameter		mm	Φ314	Φ620	Φ620	Φ660	Φ660	Φ770	Φ770	Φ770	Φ770
	Max. cutting diameter		mm	Φ314	Φ300	Φ300	Φ400	Φ400	Φ560	Φ560	Φ560	Φ560
	Max. cutting length		mm	550	300	550	700	1180	860	1360	1860	2860
Soindle	Max. spindle speed		rpm	4500	6000	6000	3500	3500	2000	2000	2000	2000
	Spindle power		kW	Built-in motor 22/25	11/15	11/15	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5
	Spindle nose		ISO	A2-6	A2-6	A2-6	A2-8	A2-8	A2-8	A2-8	A2-11	A2-11
	Spindle bore		mm	Φ66	Φ56	Φ56	Φ86	Φ86	Φ92	Φ92	Φ106	Φ106
	Max. bar capacity		mm	Φ51	Φ44	Φ44	Φ74	Φ74	Φ77	Φ74	Φ74	Φ89
	Hydraulic chuck		inch	8 (Hollow)	6 (Hollow)	6 (Hollow)	10（solid)	10（solid)	12（solid)	12（solid)	12（中实)	12（中实)
	Height from spindle center to ground		mm	1280	1060	1060	1050	1050	1120	1120	1120	1120
Sub-spindle	Max. spindle speed		rpm	4500	-	-	-	-	-	-	-	-
	Spindle power		kW	Built-in motor 22/25	-	-	-	-	-	-	-	-
	Spindle nose		ISO	A2-6	-	-	-	-	-	-	-	-
	Spindle bore		mm	Φ66	-	-	-	-	-	-	-	-
	Max. bar capacity		mm	Φ51	-	-	-	-	-	-	-	-
	Hydraulic chuck		inch	8 (Hollow)	-	-	-	-	-	-	-	-
X&Z&Y axis	Travel		mm	650	-	-	-	-	-	-	-	-
	Travel X1/X2		mm	200/200	210 (X)	210 (X)	280（X)	280（X)	350（X)	350（X)	350（X)	350（X)
	Travel Z1/Z2		mm	650/650	400 (Z)	600/550	800（Z)	1280（Z)	960（Z)	1460（Z)	1960（Z)	2960（Z)
	Travel Y		mm	100(±50)	105(±52.5)	105(±52.5)	100（±50)	100（±50)	120（±60)	120（±60)	120（±60)	120（±60)
	Travel speed X1/X2		m/min	30	30 (X)	30 (X)	24（X)	24（X)	12（X)	12（X)	12（X)	12（X)
	Travel speed Z1/Z2		m/min	36	30 (Z)	30/10 (Z1/Z2)	30（Z)	30（Z)	16（Z)	16（Z)	16（Z)	10（Z)
	Travel speed Y		m/min	15	10	10	10	10	10	10	10	10
Living turret	Tool position		mm	12×2 (BMT65)	12 (BMT55)	12 (BMT55)	12（BMT55)	12（BMT55)	12（BMT65)	12（BMT65)	12（BMT65)	12（BMT65)
	Max. live tool speed		rpm	5000	6000	6000	4000	4000	4000	4000	4000	4000
	Turning tool shank size		mm	25×25	25×25	25×25	25×25	25×25	25×25	25×25	25×25	25×25
	Boring tool holder diameter		mm	Φ40	Φ32	Φ32	Φ40	Φ40	Φ50	Φ50	Φ50	Φ50
	Max. drilling capacity		mm	Φ16×0.2	Φ14×0.16	Φ14×0.16	Φ14×0.15	Φ14×0.15	Φ16×0.2	Φ16×0.2	Φ16×0.2	Φ16×0.2
	Max. tapping capacity		mm	M14×2/M20×1.5	M10×1.5/M24×1	M10×1.5/M24×1	M10×1.5/M24×1	M10×1.5/M24×1	M14×2/M20×1.5	M14×2/M20×1.5	M14×2/M20×1.5	M14×2/M20×1.5
	Max. milling capacity		mm	Φ20×12×40	Φ16×12×40	Φ16×12×40	Φ16×12×40	Φ16×12×40	Φ20×12×40	Φ20×12×40	Φ20×12×40	Φ20×12×40
Machine accuracy	Positioning accuracy	X1/X2	mm	0.01/0.01	0.008(X)	0.008(X)	0.008(X)	0.008(X)	0.010（X)	0.010（X)	0.010（X)	0.010（X)
		Z1/Z2	mm	0.01/0.01	0.008(Z)	0.008(Z)	0.008(Z)	0.008(Z)	0.011（Z)	0.014（Z)	0.020（Z)	0.031（Z)
		Y	mm	0.01	0.008	0.008	0.01	0.01	0.01	0.01	0.01	0.01
		C1/C2	-	51"/51"	51"(C)	51"(C)	51"(C)	51"(C)	51"(C)	51"(C)	51"	51"
	Repeatability accuracy	X1/X2	mm	0.005/0.05	0.004(X)	0.004(X)	0.004(X)	0.004(X)	0.006（X)	0.006（X)	0.007（X)	0.007（X)
		Z1/Z2	mm	0.005/0.05	0.004(Z)	0.004(Z)	0.004(Z)	0.004(Z)	0.008（Z)	0.008（Z)	0.018（Z)	0.022（Z)
		Y	mm	0.005	0.004	0.004	0.005	0.005	0.006	0.006	0.006	0.006
		C1/C2	-	20"	20"(C)	20"(C)	20"(C)	20"(C)	20"(C)	20"(C)	20"	20"
Other	Machine power capacity		kVA	66	45	45	35	35	55	55	55	55
	Machine dimension (L x W x H)		mm	4500×2500×2350	3855×1940×1950 (including Chip removal machine)		4490×1880×1900 (including Chip removal machine)	5040×1880×1990 (including Chip removal machine)	5230×2050×2250 (including Chip removal machine)	5770×2100×2405 (including Chip removal machine)	6890×2245×2440	8020×2350×2500
	Machine weight		kg	8500	3800	4200	4200	4700	7100	7600	8300	9500
	CNC system		-	NEWAY FANUC				NEWAY FANUC				
	Motor torque X/Y/Z		N.m	12	11	11	11	11	20/11/20	20/11/20	20/11/20	20/11/20
	Automatic chip conveyor		-	Automatic right chip conveyor [Automatic left chip conveyor/ Automatic rear chip conveyor]				Automatic right chip conveyor [Automatic left chip conveyor/ Automatic rear chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]			

Standard on Neway Lathes:
Coolant system, installation kit, automatic lubricating device, standard tool attachment, foot pedal clamp and unclamp switch, hydraulic chuck and cylinder, soft jaws, hydraulic device, air gun, tri-color status lamp, chip cart, fully enclosed cabinet protection, waste oil collection device, LED lamp.

Optional on Neway Lathes:
Hard jaws, special chuck, automatic tool measurement, steady rest, automatic door, additional tool attachment, air-blow mechanism, bar feeder, oil mist collector, oil skimmer, tailstock travel inspection, high-pressure coolant chip break, parts catcher.

[ ]Option

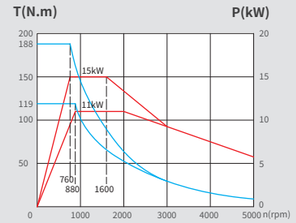
NL Series-
High precision Slant bed CNC lathe

- The overall funnel type flat bed, integral casting, overall widening, rigidity improvement, convenient chip removal;
- The inclined bed saddle structure, rolling guide design;
- The mechanical spindle, electric spindle modular design, the electric spindle adopts the air cooling system;
- Independent research and development of 12 station servo turret, integrated turret box design, turret rigidity greatly improved;
- Integrated funnel type flat bed structure, more suitable for automatic line layout;
- Drive parts refined design, suitable for high standard parts processing;
- Compact structure, small footprint.

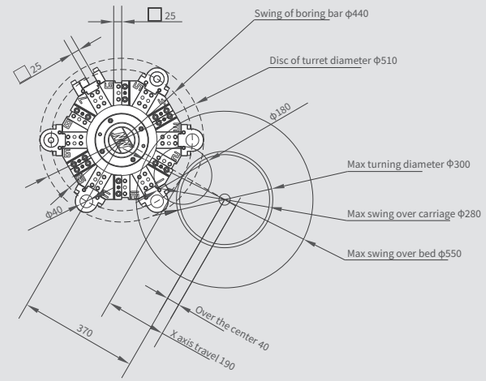
Spindle Power Torque Diagram | **Tool Interference Diagram** | **External Dimensions**

(Unit: mm)

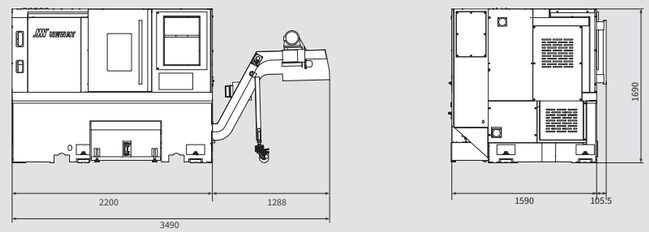
NLH202LV



NLH202LV



NLH202LV



Item			Unit	NLH202LV
Processing range	Max. swing over bed		mm	Φ550
	Max. swing over saddle		mm	Φ280
	Max. turning diameter		mm	Φ300
	Max. turning length		mm	560
	Max. bar capacity		mm	Φ51
Spindle	Max. spindle speed		rpm	4600
	Spindle nose		ISO	A2-6
	Spindle bore		mm	Φ61
	Height from spindle center to ground		mm	1020
Tail stock	Tailstock quill travel		mm	520
	Tailstock quill taper		Morse	5#(living center)
Axis X/Z	Travel X/Z		mm	190/580
	Rapid travel speed X/Z		m/min	30/30
Turret	Tool position		-	12
	Turning tool shank size		mm	25×25
	Boring tool holder diameter		mm	Φ40
Machine accuracy	Positioning accuracy	X	mm	0.008
		Z	mm	0.008
	Repeatability accuracy	X	mm	0.004
		Z	mm	0.004
Machine power capacity			kVA	25
Machine dimension (L x W x H)			mm	3490×1590×1690
Machine weight			kg	3700
CNC system			-	
Spindle motor power			kW	11/15
Motor torque X/Z			N.m	7/7
Hydraulic chuck			inch	hollow 8"[solid 8"/solid(hollow)10"]
Automatic chip conveyor			-	Automatic right chip conveyor [Automatic rear chip conveyor]

Standard on Neway Lathes:
Coolant system, installation kit, automatic lubricating device, standard tool attachment, foot pedal clamp and unclamp switch, hydraulic chuck and cylinder, soft jaws, hydraulic device, air gun, tri-color status lamp, chip cart, fully enclosed cabinet protection, waste oil collection device, LED lamp.

Optional on Neway Lathes:
Hard jaws, special chuck, automatic tool measurement, steady rest, automatic door, additional tool attachment, air-blow mechanism, bar feeder, oil mist collector, oil skimmer, tailstock travel inspection, high-pressure coolant chip break, parts catcher.

[ ]Option

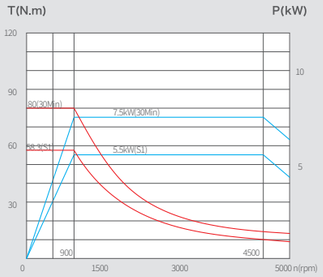
NL series-
Gang tooling type CNC slant bed lathe

- Whole slant bed design, with high rigidity and smooth chip removal
- FEA structure analysis realize the correct layout of casting ribs to increase rigidity and lessen stress.
- The X/Z axis ball screw is pre-tensioned to reduce influence of temperature increase on the accuracy of the ball screw during machining. The servo motor is directly connected with the high speed and silent ball screw.
- Utilizes a high rigidity spindle box with lower noise, higher precision and longer service life.
- World Class functional components, equipped with high class servo drivers and motors to realize reliable performance, excellent controllability, high indexing accuracy.
- The wide range of options: such as bar feeder, parts catcher, larger hollow chuck, bigger spindle bore, tool measurement, etc.

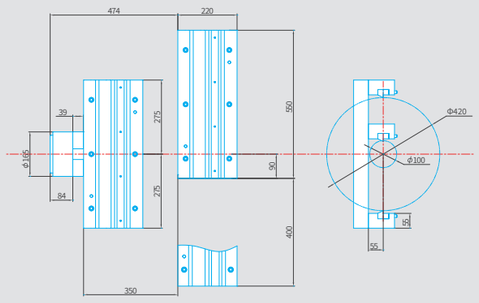
Spindle Power Torque Diagram　Tool Interference Diagram　External Dimensions

(Unit: mm)

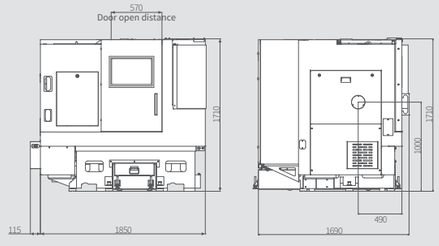
NL161G



NL161G



NL161G



Item			Unit	NL161G
Processing range	Max. swing over bed		mm	Φ520
	Max. swing over saddle		mm	Φ110
	Max. turning diameter		mm	-
	Max. turning length		mm	300
	Max. bar capacity		mm	Φ39
Spindle	Max. spindle speed		rpm	5000
	Spindle nose		ISO	A2-5
	Spindle bore		mm	Φ46
	Height from spindle center to ground		mm	1000
Axis X/Z	Travel X/Z		mm	400/350
	Rapid travel speed X/Z		m/min	24/24
Gang type tool post	Tool position		-	1～4
	Turning tool shank size		mm	20×20
	Boring tool holder diameter		mm	Φ25
Machine accuracy	Positioning accuracy	X	mm	0.006
		Z	mm	0.006
	Repeatability accuracy	X	mm	0.004
		Z	mm	0.004
Machine power capacity			kVA	20
Machine dimension (L x W x H)			mm	1965×1690×1710
Machine weight			kg	2350
CNC system			-	GSK988TA
Spindle motor power			kW	5.5/7.5
Motor torque X/Z			N.m	7.16/7.16
Hydraulic chuck			inch	hollow 6"[solid 6"/ solid(hollow)8"]
Automatic chip conveyor			-	Manual right chip conveyor [Automatic rear chip conveyor]

HL Series-
Heavy cutting Slant bed CNC lathe

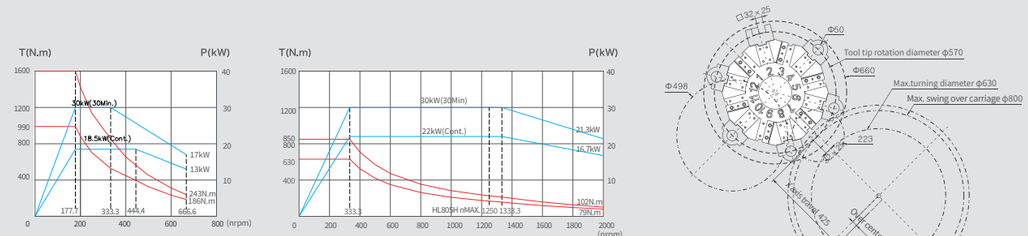
- The overall bed is L-shaped structure layout, integral 45° slant bed,

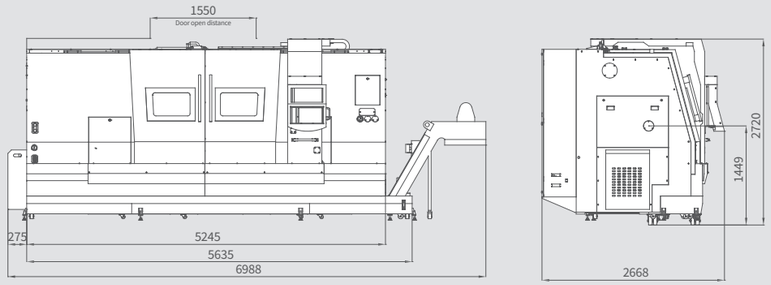
the rectangular guide way, the large span layout of the spindle, X-axis and Z-axis, high precision and high rigidity, the main drive system adopts wide-area motor driven with features high performance and high torque.

Spindle Power Torque Diagram **Tool Interference Diagram** **External Dimensions**

(Unit: mm)

HL805H





	Item		Unit	HL805H
Processing range	Max. swing over bed		mm	850
	Max. swing over saddle		mm	Φ630
	Max. turning diameter		mm	Φ800
	Max. turning length		mm	1500
	Max. bar capacity		mm	Φ89
Spindle	Max. spindle speed		rpm	1250
	Spindle nose		ISO	A2-11
	Spindle bore		mm	Φ106
	Height from spindle center to ground		mm	1290
Hydraulic tailstock	Tailstock quill		mm	Φ160
	Tailstock quill travel		mm	180
	Tailstock quill taper		Morse	5#
Travel	Travel X/Z		mm	425/1600
	Rapid travel speed X/Z		m/min	8/12
Hydraulic Turret	Tool position		-	12
	Turning tool shank size		mm	32×25
	Max. boring tool holder		mm	Φ50
Machine accuracy	Positioning accuracy	X	mm	0.012
		Z	mm	0.016
	Repeatability accuracy	X	mm	0.006
		Z	mm	0.008
Other	Machine power capacity		kVA	45
	Machine dimension (L x W x H)		mm	7000×2360×2430
	Machine weight		kg	15000
	CNC system		-	NEWAY FANUC [SIEMENS]
	Spindle motor power		kW	△22/30 (Y18.5/30)
	Motor torque X/Z		N.m	22/22
	Hydraulic chuck		inch	hollow 15"[Solid 15"Solid (hollow)18"]
	Automatic chip conveyor		-	Automatic right chip conveyor[Automatic left chip conveyor]

Standard on Neway Lathes:
Coolant system, installation kit, automatic lubricating device, standard tool attachment, foot pedal clamp and unclamp switch, hydraulic chuck and cylinder, soft jaws, hydraulic device, air gun, tri-color status lamp, chip cart, fully enclosed cabinet protection, waste oil collection device, LED lamp.

Optional on Neway Lathes:
Hard jaws, special chuck, automatic tool measurement, steady rest, automatic door, additional tool attachment, air-blow mechanism, bar feeder, oil mist collector, oil skimmer, tailstock travel inspection, high-pressure coolant chip break, parts catcher.

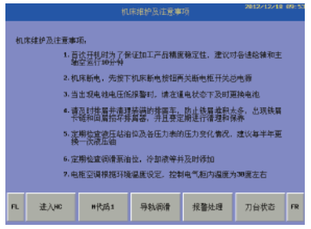
[ ]Option

Control system

Neway uses the FANUC PICTURE function to carry out a truly user friendly Human Machine Interface (HMI).

1 Machine Maintenance

Machine maintenance precautions andrelated tips.



2 Diagnostic Alarms

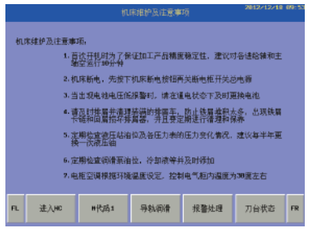
FANUC System PMC processing alarm information and processing methods allow the machine operators / maintenance people quick access to find out the cause of the alarm.

3 M code

Machine tool auxiliary function codes “M codes” can be customized, this interface can make the programming faster and considerably more intuitive.

4 Chuck control

Manual chuck or hydraulic chuck can be chosen as options. Controller has specific parameters and auxiliary function codes for further control on processes.



5 Turret

Shows the tool change process and the status of tool change.

6 Tailstock control

Servo tailstock or hydraulic tailstock as option, which can be viewed and manipulated at the controller.

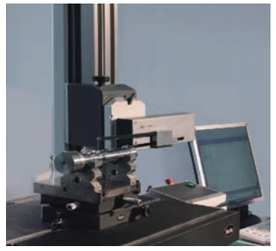
7 Parameter Interface

The Keeper Relay parameter can be selected on screen to turn on or turn off the different alarm information and auxiliary functions.

Production and detection

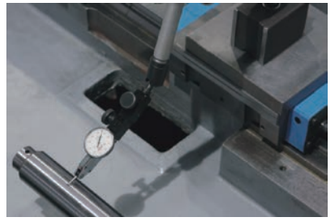
● High-precision spindle grinding

● High precision spindle boring



● Optics test equipment

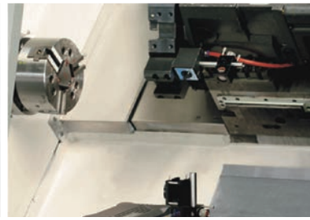
● Belt tension test



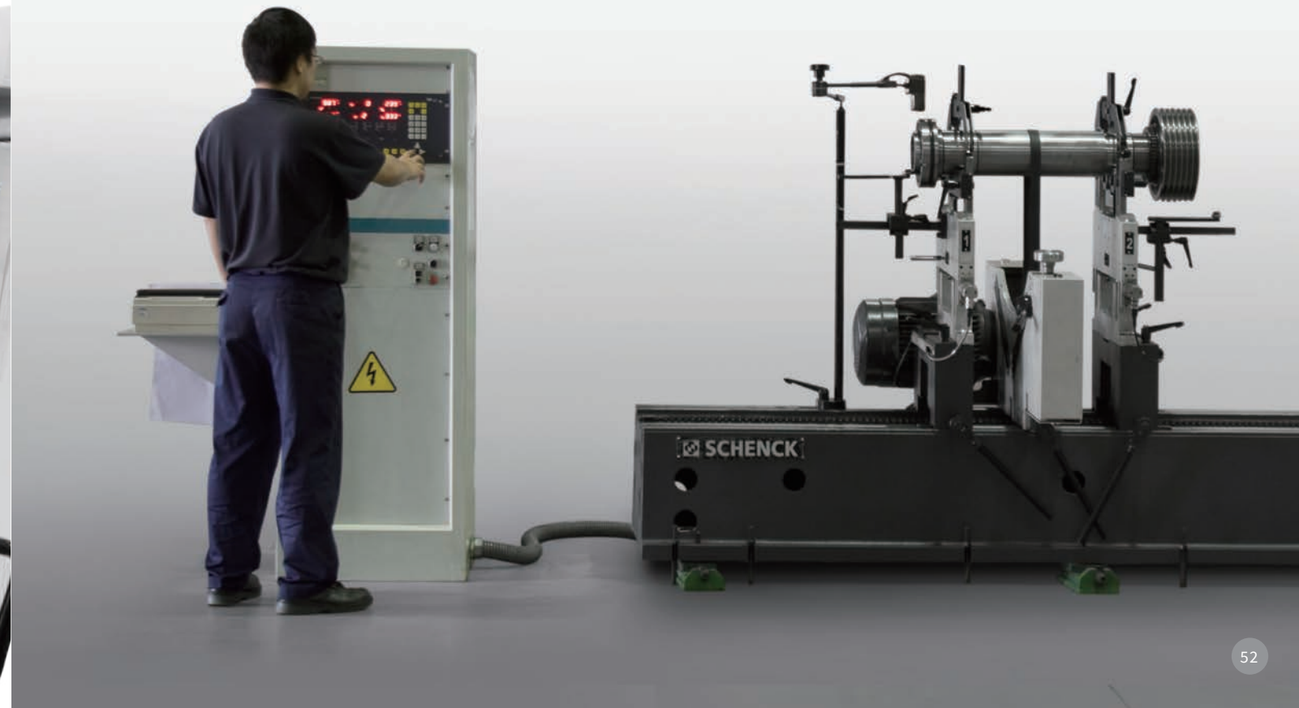
● Assembly inspection

● Boring bar concentricity inspection

● Hand scraping



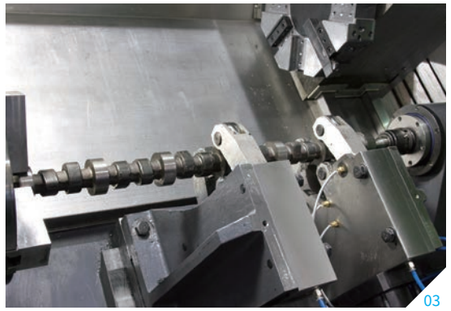
● Laser calibration



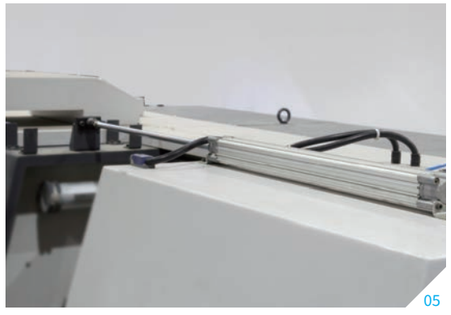
Optional functions

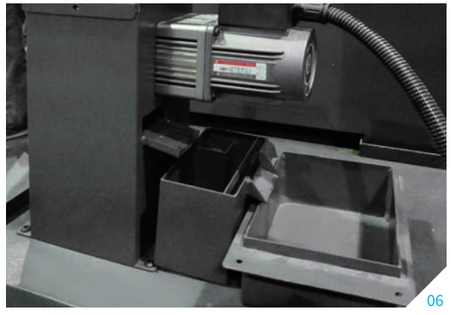

01

02


03


04


05


06

01 Automatic parts catcher
02 Automatic bar feeder
03 Programmable steady rest
04 Automatic tool measurement
05 Pneumatic auto door
06 Oil skimmer

Automatic production lines

NL161

Automatic Line Project：Auto parts
Machine Model: NL161
Workpiece Name: Throttle valve
Workpiece Material: 40Cr

NL403

Automatic Line Project：Auto parts
Machine Model: NL403
Workpiece Name: Cylinder liner
Workpiece Material: HT250

NL201

Automatic Line Project：Auto parts
Machine Model：NL251
Workpiece Name: Claw pole
Workpiece Material: 42CrMo

NL502

Automatic Line Project：
Auto parts
Machine Model：NL502
Workpiece Name: Claw pole
Workpiece Material: 42CrMo

NL504

Automatic Line Project: Elevator shaft
Machine Model：NL504
Workpiece Name: Lifting shaft
Workpiece Material: 45#steel