

Slant bed CNC lathe NL Series



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.



Headstock

- The use of thermal symmetry design combines with the wide range of heat dissipation. Reinforced 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.



• Servo turret



• Hydraulic turret



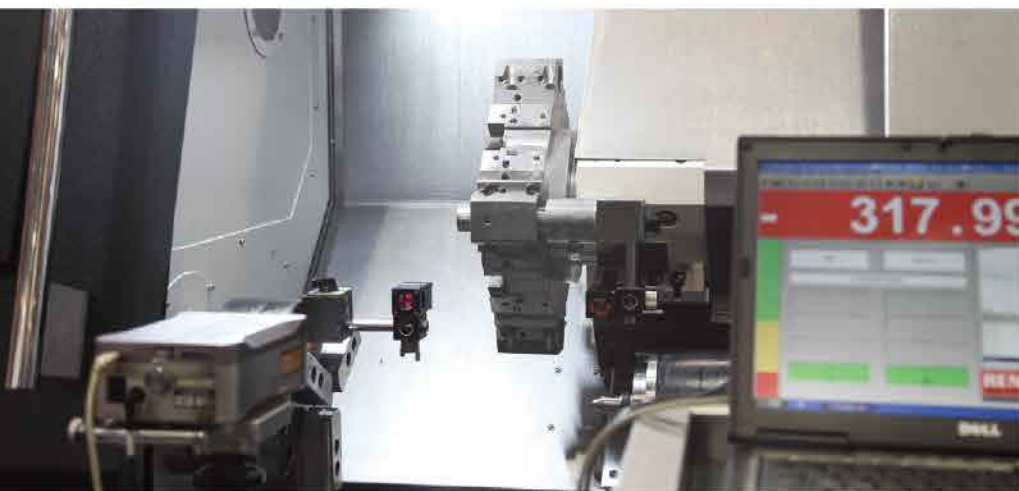
• BMT Live turret



• 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.

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.



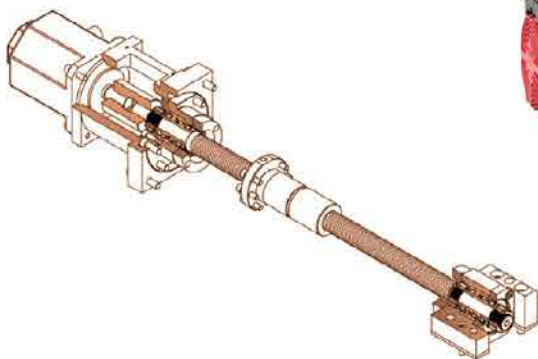
Double-nut Ball Screw

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.

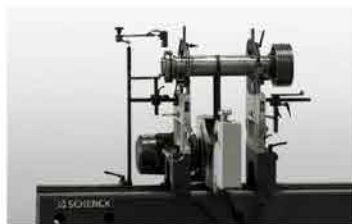


03 High Stability

In the critical components assembling, multiple measuring and quantifying assembly process is the key to achieving Newway'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 spindle rotating.



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-term sustainability of the machine tools through attainability of available parts through World Class suppliers.

Newway'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

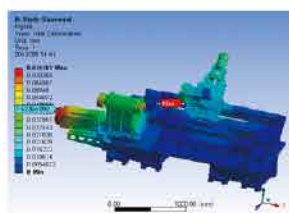
10 R&D departments and 300+ R&D engineers with specific expertise. Neway can develop 20+ new products per year, 10+ continuous improvement projects in fundamental areas, using the PLM full life cycle management system to enhance R&D efficiency.

Ongoing continuously improving quality refining projects:

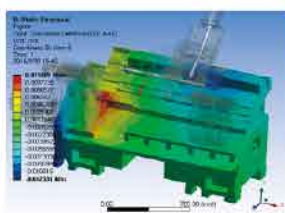
- Static stiffness testing and research of machine tools
- Research on vibration and dynamic stiffness of machine tools
- Research on spectrum analysis of machine tools
- Finite Element Analysis of complete machine and components
- Thermal deformation analysis of entire machine and components
- High-speed 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.



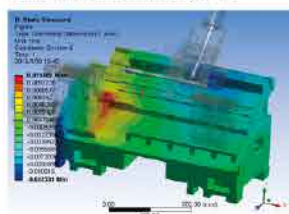
- Machine stiffness analysis deformation map shows where more material needs to be applied



- Y direction analyzes deformation

Dynamic Analysis

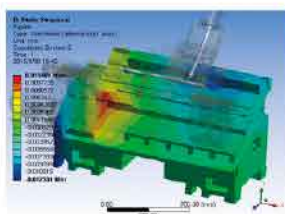
Through dynamic performance balancing analysis, greatly reduce harmonics, improves the natural frequency and vibration resistance of the machine tool.



- Modal dynamic analysis

Thermal Analysis

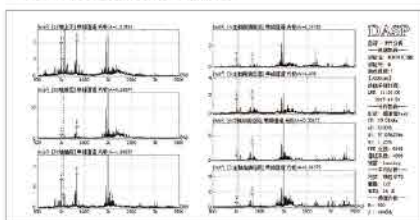
Thermal analysis of the spindle components reduces the thermal deformation of the spindle.



- Thermal analysis of lathe spindle

Vibration and Spectrum Analysis

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



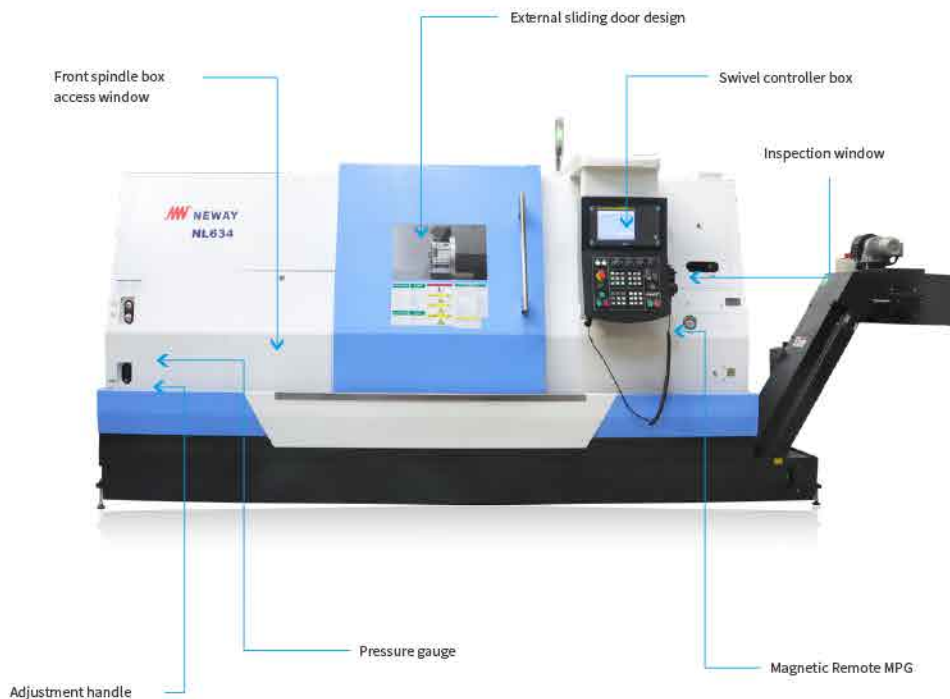
Static and Dynamic Stiffness Studies

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



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

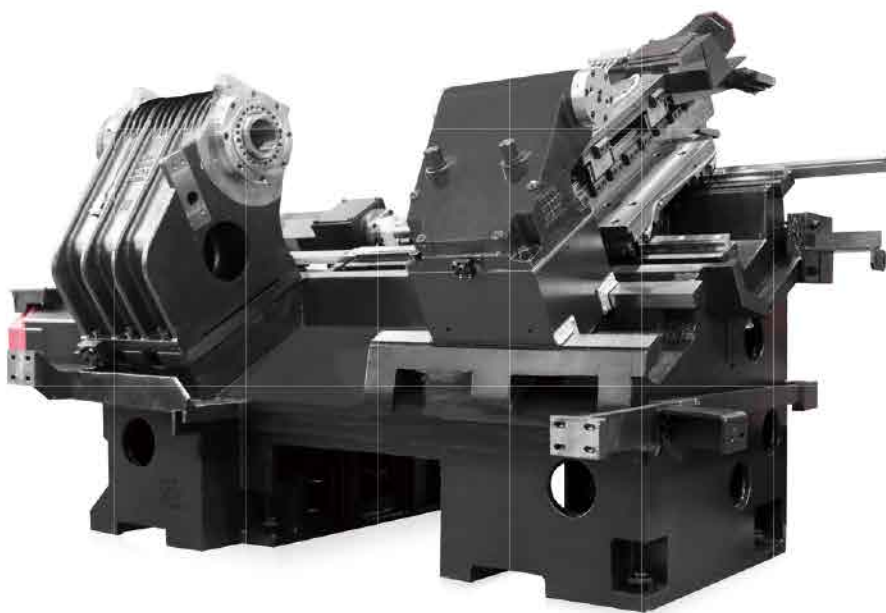
Note: The above data are all from actual use cases. The data listed above may not be reached, when the cutting conditions and environmental conditions are different.

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	Unit	NL161	NL251	NL252	NL253	NL403	NL405
Max. swing on bed	mm	Φ500	Φ550	Φ550	Φ550	Φ660	Φ660
Max. cutting dia	mm	Φ320	Φ360	Φ360	Φ360	Φ500	Φ500
Max. cutting length	mm	320	330	550	810	770	1250
Motor power	kW	5.5/7.5	7.5/11	7.5/11	7.5/11	15/18.5	15/18.5
Spindle speed	rpm	6000	5000	5000	5000	3500	3500



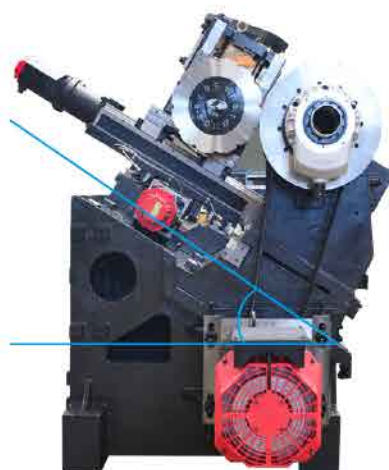
1 Linear Guideway

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.

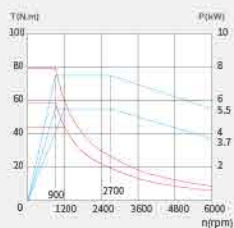


Spindle Power Torque Diagram

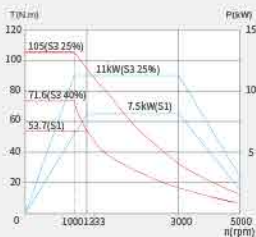
Tool Interference Diagram

(Unit:mm)

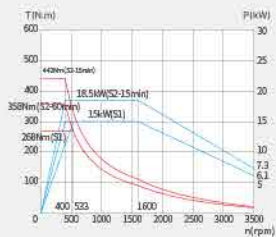
NL161



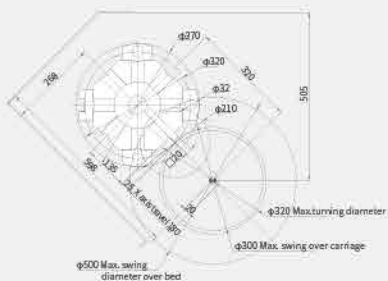
NL251, NL252, NL253



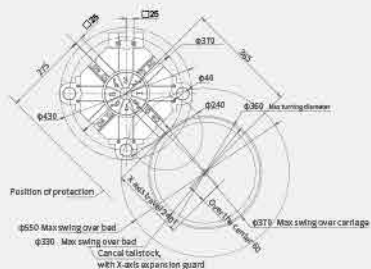
NL403, NL405



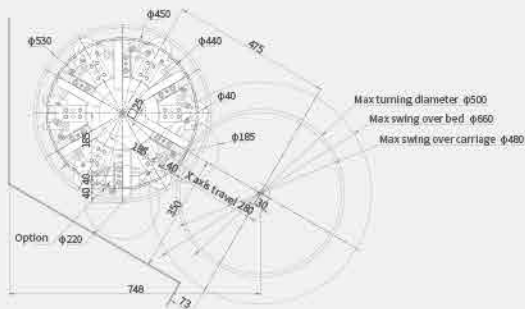
NL161



NL251, NL252, NL253



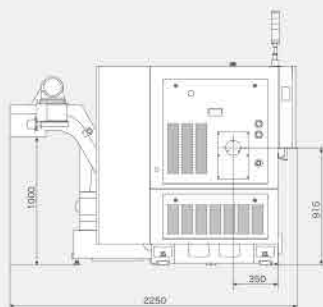
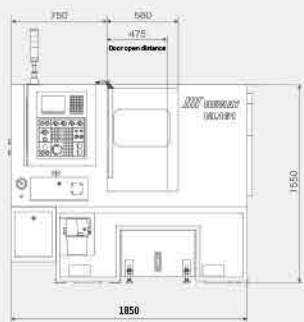
NL403, NL405



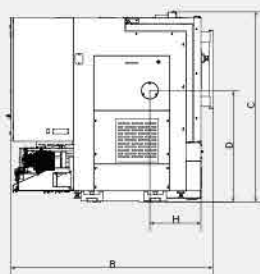
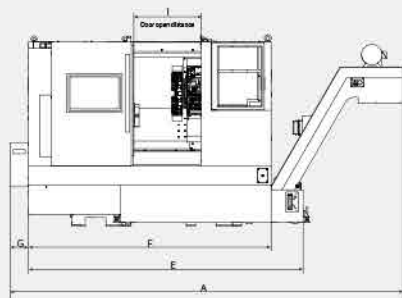
External Dimensions

(Unit:mm)

NL161



NL251, NL252

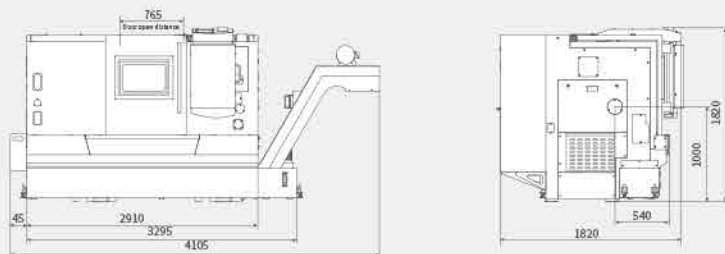


Models	A	B	C	D	E	F	G	H	I
NL251	3610	1815	1710	1000	2465	2180	245	460	605
NL252	3950	1815	1710	1000	2805	2520	245	460	725

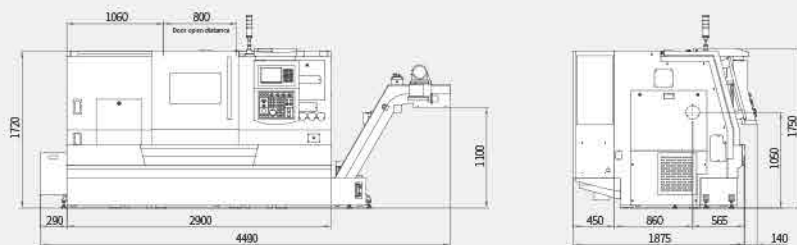
External Dimensions

(Unit:mm)

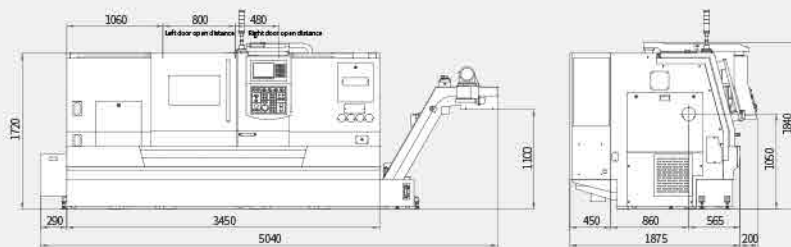
NL253



NL403



NL405



Item	Unit	NL161	NL251	NL252
Max. swing over bed	mm	Φ500	Φ550	Φ550
Max. swing over saddle	mm	Φ300	Φ330	Φ370
Max. turning diameter	mm	Φ320	Φ360	Φ360
Max. turning length	mm	320	330	550
Max. bar capacity	mm	Φ44	Φ51	Φ51
Max. spindle speed	rpm	6000	5000	5000
Spindle nose	ISO	A2-5	A2-6	A2-6
Spindle bore	mm	Φ56	Φ62	Φ62
Height from spindle center to ground	mm	915	1000	1000
Tailstock quill diameter	mm	-	-	Φ75
Tailstock quill travel	mm	-	-	80
Travel X/Z	mm	180/350	240/330	240/550
Rapid travel speed X/Z	m/min	30/30	24/30	24/30
X-axis screw diameter/pitch	mm	Φ32/10	Φ32/10	Φ32/10
Z-axis screw diameter/pitch	mm	Φ32/10	Φ32/12	Φ32/12
Tool position	-	8 (servo turret)	8 (servo turret)	8 (servo turret)
Turning tool shank size	mm	25×25	25×25	25×25
Boring tool holder diameter	mm	Φ40	Φ40	Φ40
Machine power capacity	kVA	15	20	20
Machine dimension (L x W x H)	mm	1850×2250×1550	3530×1710×1655	3870×1710×1655
Machine weight	kg	2600	3200	3800
CNC system	-	NEWAY FANUC [SIEMENS]		
Spindle motor power	kW	5.5/7.5	7.5/11	7.5/11
Motor torque X/Z	N.m	7/7	7/7	7/7
Hydraulic chuck	inch	hollow 6"	hollow 8" [solid 8"/solid (hollow)10"]	hollow 8" [solid 8"/solid (hollow)10"]
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 left chip conveyor]

[] Option

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.

Item	Unit	NL253	NL403	NL405
Max. swing over bed	mm	Φ550	Φ660	Φ660
Max. swing over saddle	mm	Φ370	Φ480	Φ480
Max. turning diameter	mm	Φ360	Φ500	Φ500
Max. turning length	mm	810	770	1250
Max. bar capacity	mm	Φ51	Φ74	Φ74
Max. spindle speed	rpm	5000	3500	3500
Spindle nose	ISO	A2-6	A2-8	A2-8
Spindle bore	mm	Φ62	Φ86	Φ86
Height from spindle center to ground	mm	1000	1050	1050
Tailstock quill diameter	mm	Φ100	Φ100	Φ100
Tailstock quill travel	mm	100	100	100
Travel X/Z	mm	240/830	280/800	280/1280
Rapid travel speed X/Z	m/min	24/30	24/30	24/30
X-axis screw diameter/pitch	mm	Φ32/8	Φ32/8	Φ32/8
Z-axis screw diameter/pitch	mm	Φ32/10	Φ40/10	Φ40/10
Tool position	-	8	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
Machine power capacity	kVA	25	30	30
Machine dimension (L x W x H)	mm	4160×1820×1820	4490×1880×1750	5040×1880×1840
Machine weight	kg	4200	4100	4600
CNC system	-	NEWAY FANUC [SIEMENS]		
Spindle motor power	kW	7.5/11	15/18.5	15/18.5
Motor torque X/Z	N.m	7/7	11/11	11/11
Hydraulic chuck	inch	hollow 8" [solid 8"/solid (hollow)10"]	solid 10" [hollow 10"/solid (hollow)12"]	solid 10" [hollow 10"/solid (hollow)12"]
[Hydraulic steady rest]	mm	Φ70	Φ165	Φ165
Automatic chip conveyor	-	Automatic right chip conveyor [Automatic rear chip conveyor/ Automatic left chip conveyor]	Automatic right chip conveyor [Automatic rear chip conveyor/ Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]

[] Option

Standard on Newway Lathes:

Installation kit, automatic lubricating device, standard tool attachment, foot pedal clamp and unlamp 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 Newway 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.

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	Unit	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	5000	4000

Item		Unit	NL251P	NL252P	NL253P
Processing range	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	Φ51	Φ51	Φ66
Spindle	Max. spindle speed	rpm	5000	5000	4000
	Spindle nose	ISO	A2-6	A2-6	A2-6
	Spindle bore	mm	Φ62	Φ62	Φ76
	Height from spindle center to ground	mm	1000	1000	1000
Hydraulic tailstock	Tailstock quill diameter	mm	-	Φ75	Φ100
	Tailstock quill travel	mm	-	80	100
Axis X/Z	Travel X/Z	mm	240/330	240/550	240/830
	Rapid travel speed X/Z	m/min	30/36	30/36	30/36
	X-axis screw diameter/pitch	mm	Φ32/10	Φ32/10	Φ32/10
	Z-axis screw diameter/pitch	mm	Φ32/12	Φ32/12	Φ32/12
Turret	Tool position		12 (servo turret)	12 (servo turret)	12
	Turning tool shank size	-	25×25	25×25	25×25
	Boring tool holder diameter		Φ40	Φ40	Φ40
Other	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	hollow 8" [solid 8"/solid (hollow)10"]	hollow 8" [solid 8"/solid (hollow)10"]	hollow 8" [solid 8"/solid (hollow)10"]
	[Hydraulic steady rest]	mm	-	Φ70	Φ120
	Automatic chip conveyor	-	Automatic right chip conveyor [Automatic rear chip conveyor] [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic rear chip conveyor] [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic rear chip conveyor] [Automatic left chip conveyor]

[] Option

Standard on Neway Lathes:

Installation kit, automatic lubricating device, standard tool attachment, foot pedal clamp and unlamp 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.

NL-series

High-efficiency CNC horizontal lathe

- Integral inclined bed design, high rigidity, smoother chip removal;
- Finite element structural analysis, reasonable layout of casting tendons, good stress effect;
- X/Z-axis screws are pre-tensioned structure, which can reduce the influence of temperature rise on the precision of the screws in the process of machining; oil seals are added at the mounting place of both sides of the screws for the protection of the screw bearings; servo motors are directly connected to drive the high-speed and silent ball screws;
- Tailstock adopts linear rolling guide, good dynamic characteristics, good bearing rigidity, upper and lower layered structure, between the upper and lower layered micro-adjustment device, to facilitate the tailstock center of rotation along the X-axis direction of the fine-tuning of the tailstock top, standard with a live top of the structure of the tailstock;
- Neway independently designed a one-piece tailstock.
- Neway independently designed one-piece high rigidity spindle box, low noise, high precision, long life;
- Imported functional parts, equipped with imported servo AC motors, good system performance, good controllability, high spindle rotation accuracy;
- Wide range of options: such as feeder, splicer, large hollow chuck, enlarged spindle through-hole, programmable tailstock, tool setting instrument, hydraulic center stand, etc.

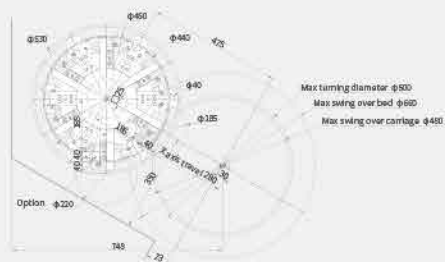


The main parameters	Unit	NL161L	NL252L	NL253L	NL402L	NL404L	NL635L
Max. swing over bed	mm	Φ500	Φ550	Φ550	Φ650	Φ650	Φ650
Max. turning diameter	mm	Φ320	Φ360	Φ360	Φ510	Φ510	Φ630
Max. turning length	mm	320	550	810	550	1000	1500
Spindle motor power	kW	5.5/7.5	7.5/11	7.5/11	11/15	11/15	15/18.5
Max. spindle speed	rpm	6000	5000	5000	4000	4000	2000

Tool Interference Diagram

(Unit:mm)

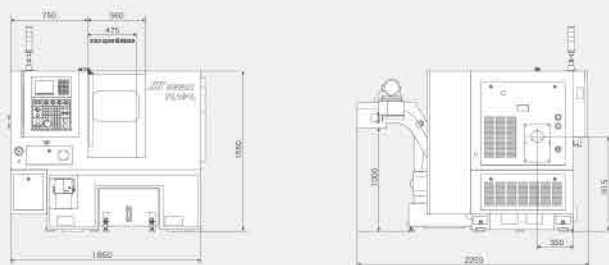
NL403L、NL405L



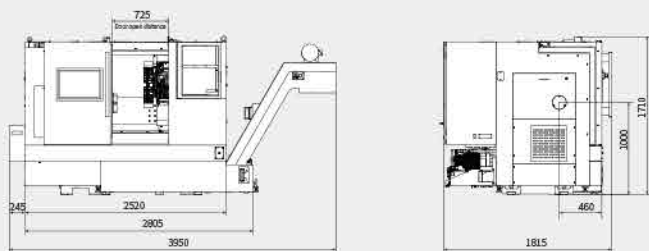
External Dimensions

(Unit:mm)

NL161L



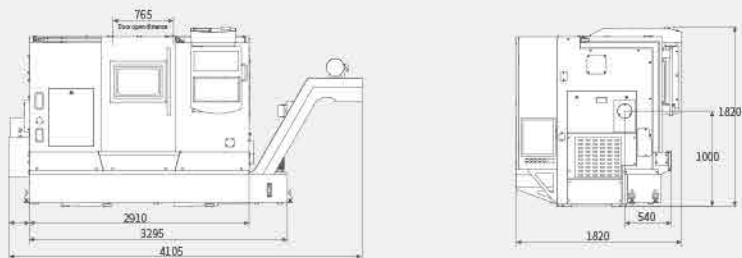
NL252L



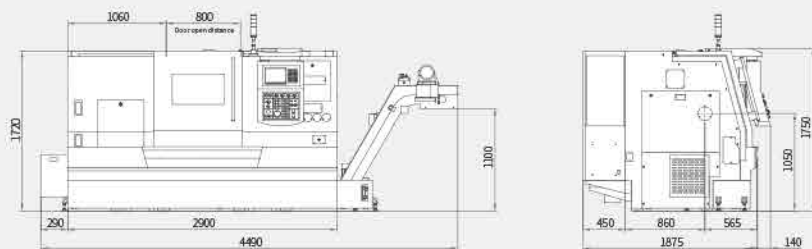
External Dimensions

(Unit:mm)

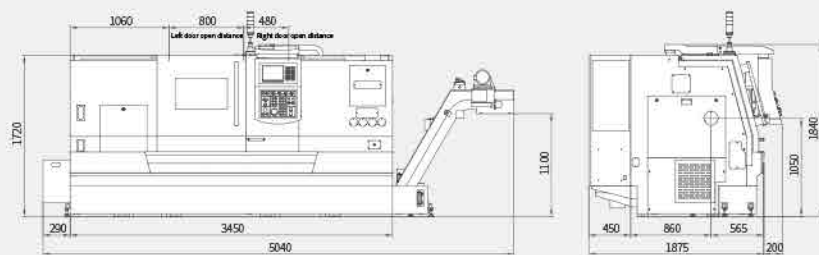
NL253L



NL403L



NL405L



Item		Unit	NL161L	NL252L	NL253L
Processing range	Max. swing over bed	mm	Φ500	Φ550	Φ550
	Max. swing over saddle	mm	Φ300	Φ370	Φ370
	Max. turning diameter	mm	Φ320	Φ360	Φ360
	Max. turning length	mm	320	550	810
	Max. bar capacity	mm	Φ44	Φ51	Φ51
Spindle	Max. spindle speed	rpm	6000	5000	5000
	Spindle nose	ISO	A2-5	A2-6	A2-6
	Spindle bore	mm	Φ56	Φ62	Φ62
	Height from spindle center to ground	mm	915	1000	1000
servo tailstock	tailstock stroke	mm	250	475	700
Axis X/Z	Travel X/Z	mm	180/350	240/550	240/830
	Rapid travel speed X/Z	m/min	30/30	24/30	24/30
	X-axis screw diameter/pitch	mm	Φ32/10	Φ32/8	Φ32/8
	Z-axis screw diameter/pitch	mm	Φ32/10	Φ32/10	Φ32/10
Living turret	Tool position	-	8 (servo turret)	8 (servo turret)	8
	Turning tool shank size	mm	20×20	25×25	25×25
	Boring tool holder diameter	mm	Φ32	Φ40	Φ40
Other	Machine power capacity	kVA	20	25	25
	Machine dimension (L x W x H)	mm	1850×2250×1550	3870×1710×1655	4105×1820×1820
	Machine weight	kg	2600	3800	4200
	CNC system	-	NEWAY FANUC [SIEMENS]		
	Spindle motor power	kW	5.5/7.5	7.5/11	7.5/11
	Motor torque X/Z	N.m	7/7	7/7	7/7
	Hydraulic chuck	inch	hollow 6" [solid 6"]	hollow 8" [solid 8"/solid (hollow) 10"]	hollow 8" [solid 8"/solid (hollow) 10"]
	[Hydraulic steady rest]	mm	-	-	-
	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 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

Item		Unit	NL403L	NL405L
Processing range	Max. swing over bed	mm	Φ660	Φ660
	Max. swing over saddle	mm	Φ480	Φ480
	Max. turning diameter	mm	Φ500	Φ500
	Max. turning length	mm	770	1250
	Max. bar capacity	mm	Φ74	Φ74
Spindle	Max. spindle speed	rpm	3500	3500
	Spindle nose	ISO	A2-8	A2-8
	Spindle bore	mm	Φ86	Φ86
	Height from spindle center to ground	mm	1050	1050
servo tailstock	tailstock stroke	mm	700	1100
Axis X/Z	Travel X/Z	mm	280/800	280/1280
	Rapid travel speed X/Z	m/min	24/30	24/30
	X-axis screw diameter/pitch	mm	Φ32/8	Φ32/8
	Z-axis screw diameter/pitch	mm	Φ40/10	Φ40/10
Living turret	Tool positio	-	12 (servo turret)	12 (servo turret)
	Turning tool shank size	mm	25×25	25×25
	Boring tool holder diameter	mm	Φ40	Φ40
Other	Machine power capacit	kVA	30	30
	Machine dimension (L x W x H)	mm	4490×1880×1750	5040×1880×1840
	Machine weight	kg	4100	4600
	CNC system	-	NEWAY FANUC [SIEMENS]	
	Spindle motor power	kW	15/18.5	15/18.5
	Motor torque X/Z	N.m	11/11	11/11
	Hydraulic chuck	inch	solid 10" [hollow 10"/solid (hollow)12"]	solid 10" [hollow 10"/solid (hollow)12"]
	[Hydraulic steady rest]	mm	Φ165	Φ165
	Automatic 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- Built-in spindle CNC horizontal lathe

- The spindle and motor are integrated, compact and space-saving, and the whole machine footprint is reduced by 12.5%;
- No intermediate transmission link, high efficiency;
- Low vibration, smooth movement, high speed machining, higher machining accuracy and surface quality can be achieved;
- Small inertia, low noise, good responsiveness, excellent dynamic and static performance;
- The motor is placed between the support bearings to increase the stiffness of the spindle system;
- Servo programmed tailstock, easy and fast tailstock movement, high efficiency, good precision retention.
- Using modern control technology and optimized design, it can meet the requirements of different working conditions and loads, and the spindle can realize emergency stop and quasi stop, with more precise control.

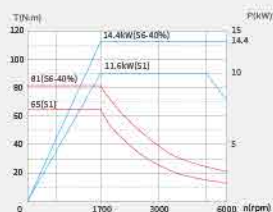


The main parameters	Unit	NL161V	NL251V	NL252V	NL253V	NL403V	NL405V	NL502V	NL504V
Max. swing over bed	mm	Φ500	Φ550	Φ550	Φ550	Φ660	Φ660	Φ660	Φ660
Max. turning diameter	mm	Φ320	Φ360	Φ360	Φ360	Φ500	Φ500	Φ500	Φ500
Max. turning length	mm	320	330	550	830	770	1250	570	1070
Spindle motor power	kW	11.6/14.4	11/15	11/15	11/15	22/26	22/26	22/26	22/26
Max. spindle speed	rpm	6000	5000	5000	5000	4000	4000	4000	4000

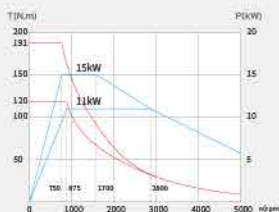
Spindle Power Torque Diagram

(Unit:mm)

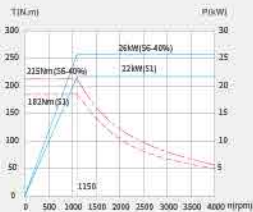
NL161V



NL251V, NL252V, NL253V



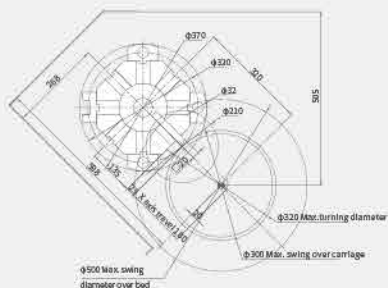
NL403V, NL405V, NL502V, NL504V



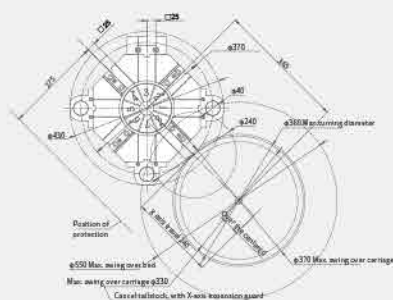
Tool Interference Diagram

(Unit:mm)

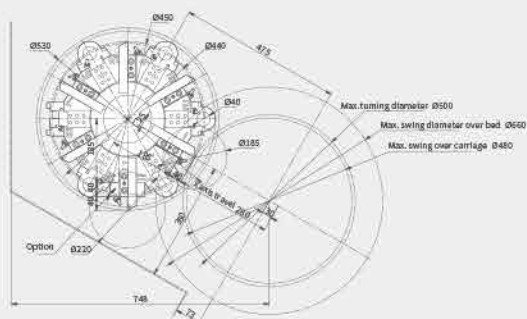
NL161V



NL251V, NL252V, NL253V



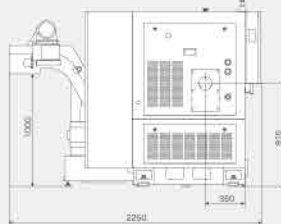
NL403V, NL405V, NL502V, NL504V



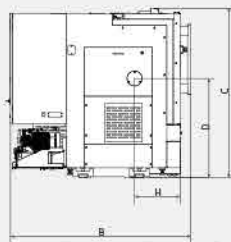
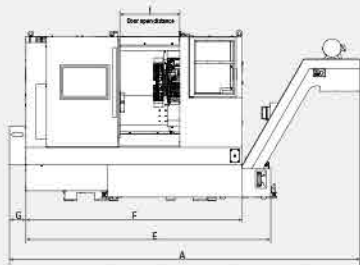
External Dimensions

(Unit:mm)

NL161V

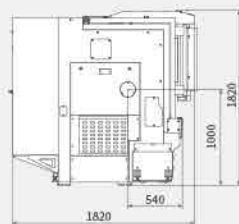
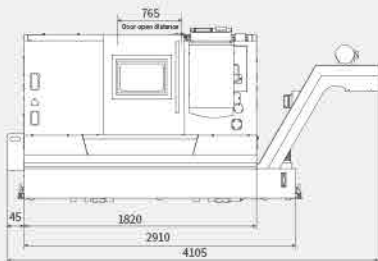


NL251V, NL252V



Models	A	B	C	D	E	F	H	I
NL251V	3365	1815	1710	1000	2465	2180	460	605
NL252V	3705	1815	1710	1000	2805	2520	460	725

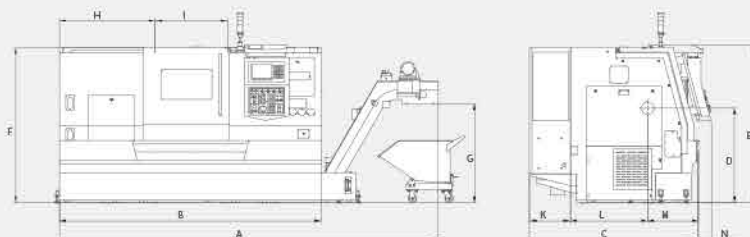
NL253V



External Dimensions

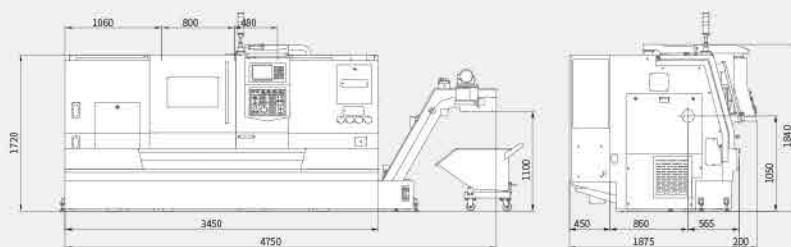
(Unit:mm)

NL403V, NL502V

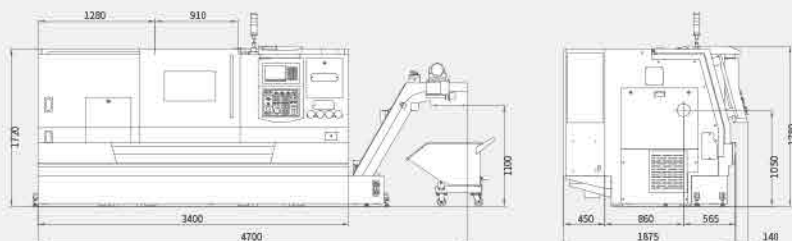


Models	A	B	C	D	E	F	G	H	I	K	L	M	N
NL403V	4200	2900	1875	1050	1750	1720	1100	1060	800	450	860	565	140
NL502V	4000	2700	1875	1050	1750	1720	1100	1060	600	450	860	565	140

NL405V



NL504V



Item	Unit	NL161V	NL251V	NL252V	NL253V
Max. swing over bed	mm	Φ500	Φ550	Φ550	Φ550
Max. swing over saddle	mm	Φ300	Φ330	Φ370	Φ370
Max. turning diameter	mm	Φ320	Φ360	Φ360	Φ360
Max. turning length	mm	320	330	550	830
Max. bar capacity	mm	Φ44	Φ51	Φ51	Φ51
Max. spindle speed	rpm	6000	5000	5000	5000
Spindle nose	ISO	A2-5	A2-6	A2-6	A2-6
Spindle bore	mm	Φ56	Φ62	Φ62	Φ62
Height from spindle center to ground	mm	915	1000	1000	1000
Tallstock quill diameter	mm	-	-	Φ75	Φ100
Tallstock quill travel	mm	-	-	80	100
Tallstock taper	Morse	-	4#(Live center)	4#(Live center)	5#(Live center)
Travel X/Z	mm	180/350	240/330	240/550	240/830
Rapid travel speed X/Z	m/min	30/30	24/30	24/30	24/30
X-axis screw diameter/pitch	mm	Φ32/10	Φ32/10	Φ32/10	Φ32/8
Z-axis screw diameter/pitch	mm	Φ32/10	Φ32/12	Φ32/12	Φ32/10
Tool position	-	8 (servo turret)	8 (servo turret)	8 (servo turret)	8 (servo turret)
Turning tool shank size	mm	20×20	25×25	25×25	25×25
Boring tool holder diameter	mm	Φ32	Φ40	Φ40	Φ40
Machine power capacity	kVA	15	25	25	25
Machine dimension (L x W x H)	mm	1850×2250×1550	3530×1710×1655	3870×1710×1655	4105×1820×1820
Machine weight	kg	2600	3200	3800	4200
CNC system	-	SIEMENS	FANUC		
Spindle motor power	kW	11.6/14.4	11/15	11/15	11/15
Motor torque X/Z	N·m	6/6	7/7	7/7	7/7
Hydraulic chuck	inch	hollow 6" [solid 6"/solid (hollow) 8"]	hollow 8" [solid 8"/solid (hollow) 10"]	hollow 8" [solid 8"/solid (hollow) 10"]	hollow 8" [solid 8"/solid (hollow) 10"]
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 left 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 eaclamp 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, tallstock travel inspection, high-pressure coolant chip break, parts catcher.

[] Option

Item	Unit	NL403V	NL405V	NL502V	NL504V
Max. swing over bed	mm	Φ660	Φ660	Φ660	Φ660
Max. swing over saddle	mm	Φ480	Φ480	Φ480	Φ480
Max. turning diameter	mm	Φ500	Φ500	Φ500	Φ500
Max. turning length	mm	770	1250	570	1070
Max. bar capacity	mm	Φ74	Φ74	Φ74	Φ74
Max. spindle speed	rpm	4000	4000	4000	4000
Spindle nose	ISO	A2-8	A2-8	A2-8	A2-8
Spindle bore	mm	Φ91	Φ91	Φ91	Φ91
Height from spindle center to ground	mm	1050	1050	1050	1050
Tailstock quill diameter	mm	Φ100	Φ100	Φ100	Φ100
Tailstock quill travel	mm	100	100	100	100
Tailstock taper	Morse	5#(Live center)	5#(Live center)	5#(Live center)	5#(Live center)
Travel X/Z	mm	280/800	280/1280	280/600	280/1100
Rapid travel speed X/Z	m/min	24/30	24/30	16/20	16/20
X-axis screw diameter/pitch	mm	Φ32/8	Φ32/8	Φ32/8	Φ32/8
Z-axis screw diameter/pitch	mm	Φ40/10	Φ40/10	Φ40/10	Φ40/10
Tool position	-	12 (servo turret)	12 (servo turret)	12 (servo turret)	12 (servo turret)
Turning tool shank size	mm	25×25	25×25	25×25	25×25
Boring tool holder diameter	mm	Φ40	Φ40	Φ40	Φ40
Machine power capacity	kVA	45	45	45	45
Machine dimension (L×W×H)	mm	4200×1880×1750	4750×1880×1840	4000×1880×1750	4700×1880×1750
Machine weight	kg	4100	4600	4000	4500
CNC system	-	FANUC			
Spindle motor power	kW	22/26	22/26	22/26	22/26
Motor torque X/Z	N·m	11/11	11/11	11/11	11/11
Hydraulic chuck	inch	solid 10" [hollow 10"/solid (hollow)12"]	solid 10" [hollow 10"/solid (hollow)12"]	solid 10" [hollow 10"/solid (hollow)12"]	solid 10" [hollow 10"/solid (hollow)12"]
Automatic chip conveyor	-	Automatic right chip conveyor [Automatic rear chip conveyor] [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic rear chip conveyor] [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]

Standard on Newway 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 Newway 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.

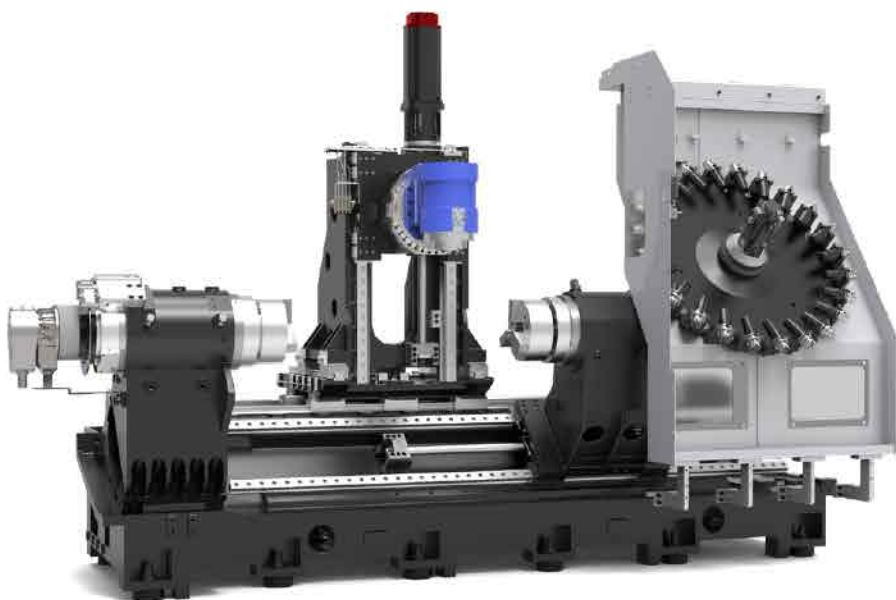
[] Option

NLM series- Mill-Turn Machining Center

- The NLM5012U is a multi-axis machining center with turning and milling functions.
- The machine is equipped with twin spindles with opposed built-in spindle motors, both spindles with C-axis indexing function.
- And it adopts horizontal plus column type composite structure, with X/Y/Z/B/Z2/C1/C2/tool spindle, eight-axis five-linkage turning and milling compound machining center;
- The machine is capable of machining curved surfaces with complex geometries, bevelled surfaces, and multitasking by exchanging complex processes between the two spindles;



The main parameters	Unit	NLM5012U
Max. machining diameter	mm	Φ500
Max. machining length	mm	1200
Max. spindle speed	rpm	3500
Max. Sub-spindle speed	rpm	3500
Max. rotational speed of the milling spindle	rpm	12000



1 One-piece cast bed

The whole machine is reasonably designed, through finite element analysis, to ensure reliable and stable machine tool;

Roller guideway, horizontal + 45° sub-spindle guideway;

45° sub-spindle inclined bed design, convenient chip removal;



2 Independent composite turning and milling head

B-axis $\pm 120^\circ$



3 Disc type tool magazine

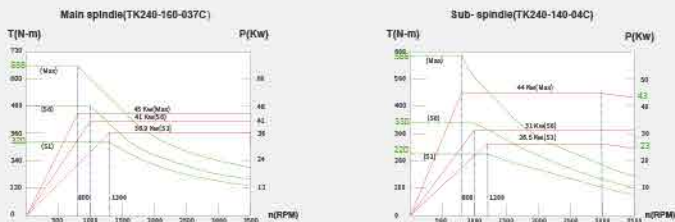
Compact structure turning and milling configuration with 24 disc tool changer;

Toolholder: HSK-T63;

Spindle Power Torque Diagram

(Unit:mm)

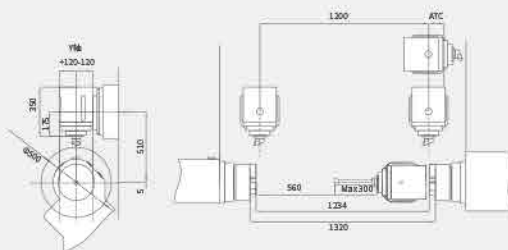
NLM5012U



Tool Interference Diagram

(Unit:mm)

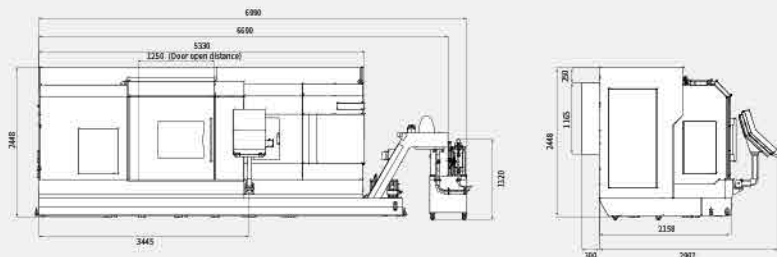
NLM5012U



External Dimensions

(Unit:mm)

NLM5012U



Item		Unit	NLM5012U
Processing range	Max. cutting diameter	mm	Φ500
	Max. cutting length	mm	1200
Spindle	Max. spindle speed	rpm	3500
	Spindle power	kW	36.9
	spindle torque	Nm	320/693
	Spindle nose	-	A2-8
	Spindle bore	mm	Φ88
	handling capacity	mm	Φ74
	Hydraulic chuck	inch	10"
Sub-spindle	Max. spindle speed	rpm	3500
	Spindle power	kW	26.5
	spindle torque	Nm	220/606
	Spindle nose	-	A2-8
	Spindle bore	mm	Φ88
	handling capacity	mm	Φ74
	Hydraulic chuck	inch	10"
milling spindle	Tool holder	-	HSK-63
	Max. spindle speed	rpm	12000
	Spindle power	kW	18.5/22
B axis	drive torque	Nm	300/600
	Max. spindle speed	rpm	70
	swing head angle	°	±120
Travel	X/Y/Z	mm	510/±120/1300
Rapid travel speed	X/Y/Z	m/min	30
Other	CNC system	-	SIEMENS
	Machine power capacity	kVA	95
	cooling tank volume	L	500
	Machine dimension (L x W x H)	mm	6630×2900×2450
	Machine weight	kg	9000

NL Series- Box Guideway Slant bed CNC lathe

- Integral inclined bed design, high rigidity, convenient chip removal;
- X/Z axis screws are pre-drawn structure, which can reduce the effect of temperature rise on the accuracy of the screws during the machining process, and use high-speed silent ball screws;
- X / Z axis hard rail design, HRC48 hardness surface heat treatment, guide span, good rigidity, anti-torsion and anti-vibration, stable machining accuracy, with low friction, wear-resistant imported paste plastic guide material, with good motion accuracy and dynamic characteristics;
- Tailstock adopts rectangular guide rail, good bearing rigidity, upper and lower layered structure, between the upper and lower layered micro-adjustment device, easy to tailstock top rotary center along the X-axis direction of fine-tuning, standard with live top structure tailstock, sleeve hydraulic drive;
- Neway's own one-piece high rigidity spindle box, low noise, high precision and long life;
- Wide range of options: e.g. feeders, receivers, large hollow chucks, enlarged spindle through-holes, programmable tailstock, tool setting gauges, hydraulic center stands, etc.



The main parameters	Unit	NL502	NL504	NL634	NL634Z	NL635	NL635Z	NL636	NL636Z	NL636	NL636Z
Max. swing over bed	mm	Φ660	Φ660	Φ770	Φ770	Φ770	Φ770	Φ770	Φ770	Φ770	Φ770
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. spindle speed	rpm	3500	3500	2000	1000	2000	1000	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 dead 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.



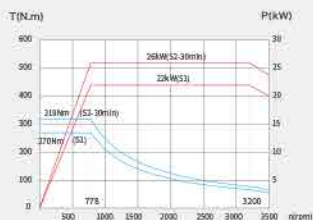
3 X/Z axis Bed Layout Design

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.

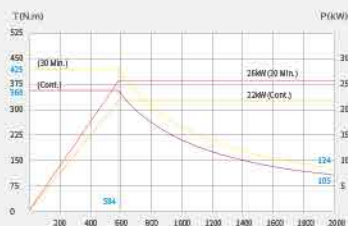
Spindle Power Torque Diagram

(Unit:mm)

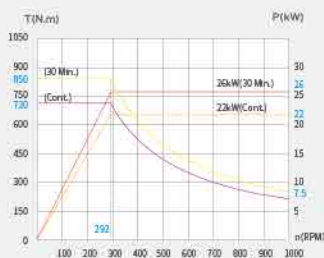
NL502, NL504



NL634, NL635, NL636, NL638



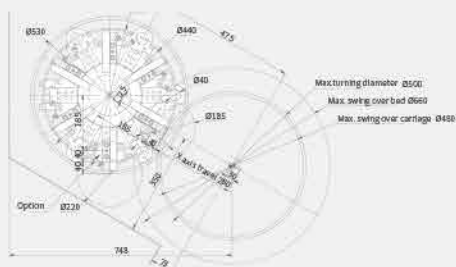
NL634Z, NL635Z, NL636Z, NL638Z



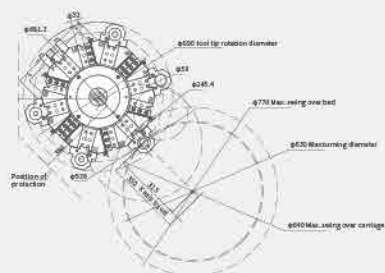
Tool Interference Diagram

(Unit:mm)

NL502, NL504



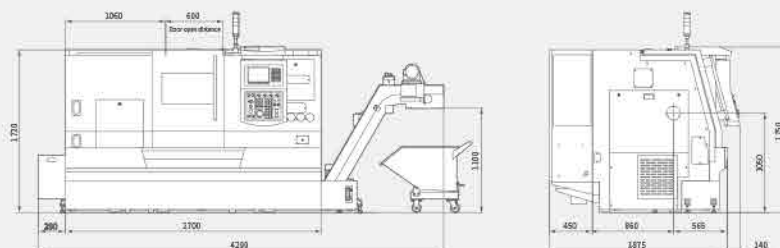
NL634/Z, NL635/Z, NL636/Z, NL638/Z



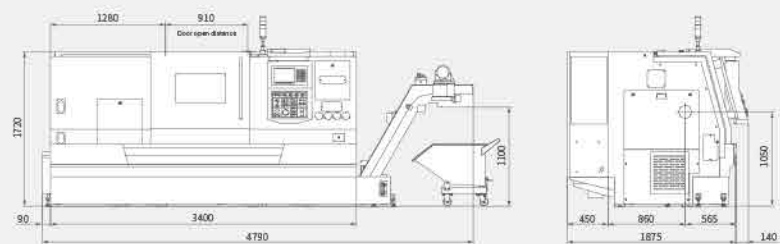
External Dimensions

(Unit:mm)

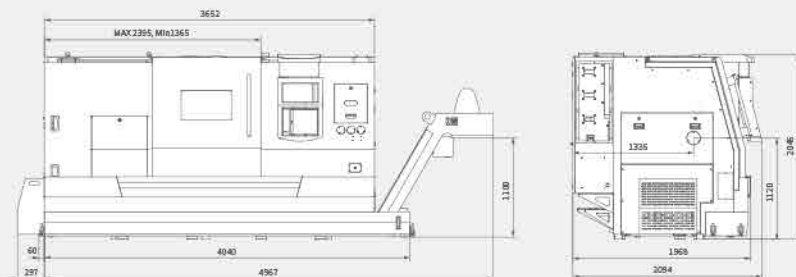
NL502



NL504



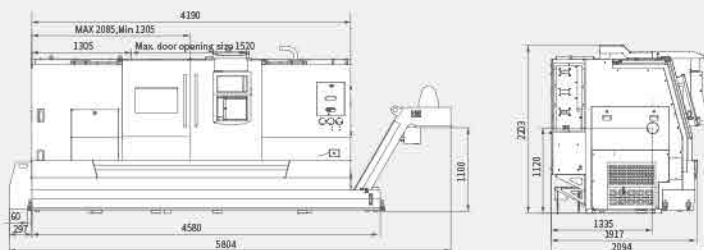
NL634, NL634Z



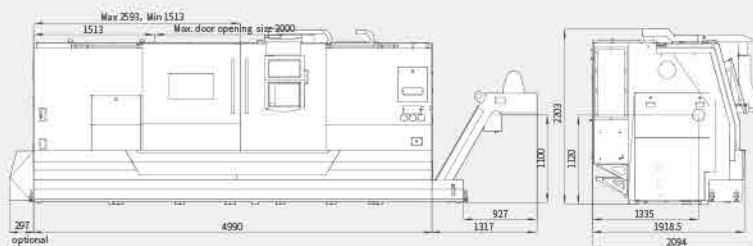
External Dimensions

(Unit:mm)

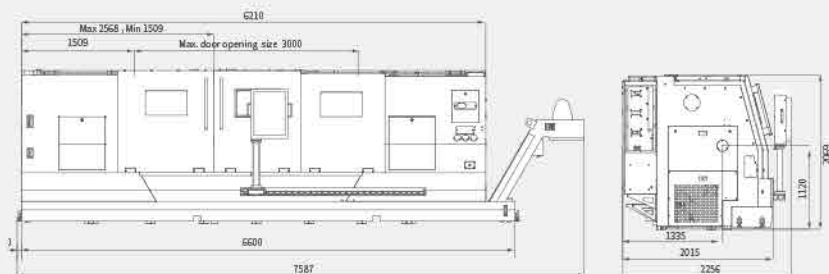
NL635、NL635Z



NL636、NL636Z



NL638、NL638Z



Item	Unit	NL502	NL504	NL634	NL634Z
Max. swing over bed	mm	Φ660	Φ660	Φ770	Φ770
Max. swing over saddle	mm	Φ480	Φ480	Φ640	Φ640
Max. turning diameter	mm	Φ500	Φ500	Φ630	Φ630
Max. turning length	mm	570	1070	1000	1000
Max. bar capacity	mm	Φ74	Φ74	Φ74	Φ89
Max. spindle speed	rpm	3500	3500	2000	1000
Spindle nose	ISO	A2-8	A2-8	A2-8	A2-11
Spindle bore	mm	Φ86	Φ86	Φ92	Φ106
Height from spindle center to ground	mm	1050	1050	1120	1120
Tailstock quill diameter	mm	Φ100	Φ100	Φ130	Φ130
Tailstock quill travel	mm	100	100	120	120
Tailstock taper	Morse	5#(Live center)	5#(Live center)	5#	5#
Travel X/Z	mm	280/600	280/1100	350/1100	350/1100
Rapid travel speed X/Z	m/min	16/20	16/20	12/16	12/16
X-axis screw diameter/pitch	mm	Φ32/8	Φ32/8	Φ40/10	Φ40/10
Z-axis screw diameter/pitch	mm	Φ40/10	Φ40/10	Φ40/10	Φ40/10
Tool position	-	12	12	12 (servo turret)	12 (servo turret)
Turning tool shank size	mm	25×25	25×25	32×32	32×32
Boring tool holder diameter	mm	Φ40	Φ40	Φ50	Φ50
Machine power capacity	kVA	35	25	35	35
Machine dimension (L x W x H)	mm	4290×1880×1750	4790×1880×1750	5030×2100×2050	5030×2100×2050
Machine weight	kg	4000	4500	7000	7100
CNC system	-	NEWAY FANUC [SIEMENS]			
Spindle motor power	kW	22/26	22/26	22/26	22/26
Motor torque X/Z	N.m	11/11	11/11	20/20	20/20
Hydraulic chuck	inch	solid 10" [hollow 10"/solid (hollow)12"]	solid 10" [hollow 10"/solid (hollow)12"]	solid 12" [hollow 12"]	solid 15" [hollow 15"]
[Hydraulic steady rest]	mm	Φ200	Φ200	Φ200	Φ200
Automatic chip conveyor	-	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right 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

Item		Unit	NL635	NL635Z	NL636
Processing range	Max. swing over bed	mm	Φ770	Φ770	Φ770
	Max. swing over saddle	mm	Φ640	Φ640	Φ640
	Max. turning diameter	mm	Φ630	Φ630	Φ630
	Max. turning length	mm	1500	1500	2000
	Max. bar capacity	mm	Φ74	Φ89	Φ89
Spindle	Max. spindle speed	rpm	2000	1000	2000
	Spindle nose	ISO	A2-8	A2-11	A2-11
	Spindle bore	mm	Φ92	Φ106	Φ106
	Height from spindle center to ground	mm	1120	1120	1120
Hydraulic tailstock	Tailstock quill diameter	mm	Φ130	Φ130	Φ130
	Tailstock quill travel	mm	120	120	120
	Tailstock taper	Morse	5#	5#	5#
Axis X/Z	Travel X/Z	mm	350/1600	350/1600	350/2100
	Rapid travel speed X/Z	m/min	12/16	12/16	12/16
	X-axis screw diameter/pitch	mm	Φ40/10	Φ40/10	Φ40/10
	Z-axis screw diameter/pitch	mm	Φ40/10	Φ40/10	Φ50/10
Turret	Tool position	-	12 (servo turret)	12 (servo turret)	12 (servo turret)
	Turning tool shank size	mm	32×32	32×32	32×32
	Boring tool holder diameter	mm	Φ50	Φ50	Φ50
Other	Machine power capacity	kVA	35	35	35
	Machine dimension (L×W×H)	mm	5570×2100×2205	5570×2100×2205	6610×2100×2210
	Machine weight	kg	7500	7600	8200
	CNC system	-	NEWAY FANUC [SIEMENS]		
	Spindle motor power	kW	22/26	22/26	22/26
	Motor torque X/Z	N.m	20/20	20/20	20/20
	Hydraulic chuck	inch	solid 12" [hollow 12"]	solid 15" [hollow 15"]	solid 12" [hollow 12"]
	[Hydraulic steady rest]	mm	Φ200	Φ200	Φ200
	Automatic chip conveyor	-	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]

[] Option

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.

Item		Unit	NL636Z	NL638	NL638Z
Processing range	Max. swing over bed	mm	Φ770	Φ770	Φ770
	Max. swing over saddle	mm	Φ640	Φ640	Φ640
	Max. turning diameter	mm	Φ630	Φ630	Φ630
	Max. turning length	mm	2000	3000	3000
	Max. bar capacity	mm	Φ89	Φ89	Φ89
Spindle	Max. spindle speed	rpm	1000	2000	1000
	Spindle nose	ISO	A2-11	A2-11	A2-11
	Spindle bore	mm	Φ106	Φ106	Φ106
	Height from spindle center to ground	mm	1120	1120	1120
Hydraulic tailstock	Tailstock quill diameter	mm	Φ130	Φ130	Φ130
	Tailstock quill travel	mm	120	120	120
	Tailstock taper	Morse	5#	5#	5#
Axis X/Z	Travel X/Z	mm	350/2100	350/3100	350/3100
	Rapid travel speed X/Z	m/min	12/16	12/10	12/10
	X-axis screw diameter/pitch	mm	Φ40/10	Φ40/10	Φ40/10
	Z-axis screw diameter/pitch	mm	Φ50/10	Φ50/12	Φ50/12
Turret	Tool position	-	12 (servo turret)	12 (servo turret)	12 (servo turret)
	Turning tool shank size	mm	32×32	32×32	32×32
	Boring tool holder diameter	mm	Φ50	Φ50	Φ50
Other	Machine power capacity	kVA	35	40	40
	Machine dimension (L×W×H)	mm	6610×2100×2210	7930×2250×2070	7930×2250×2070
	Machine weight	kg	8300	9300	9400
	CNC system	-	NEWAY FANUC [SIEMENS]		
	Spindle motor power	kW	22/26	22/26	22/26
	Motor torque X/Z	N.m	20/20	20/36	20/36
	Hydraulic chuc	inch	solid 15" [hollow 15"]	solid 12" [hollow 12"]	solid 15" [hollow 15"]
	[Hydraulic steady rest]	mm	Φ200	Φ200	Φ200
	Automatic chip conveyor	-	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]

[] Option

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:

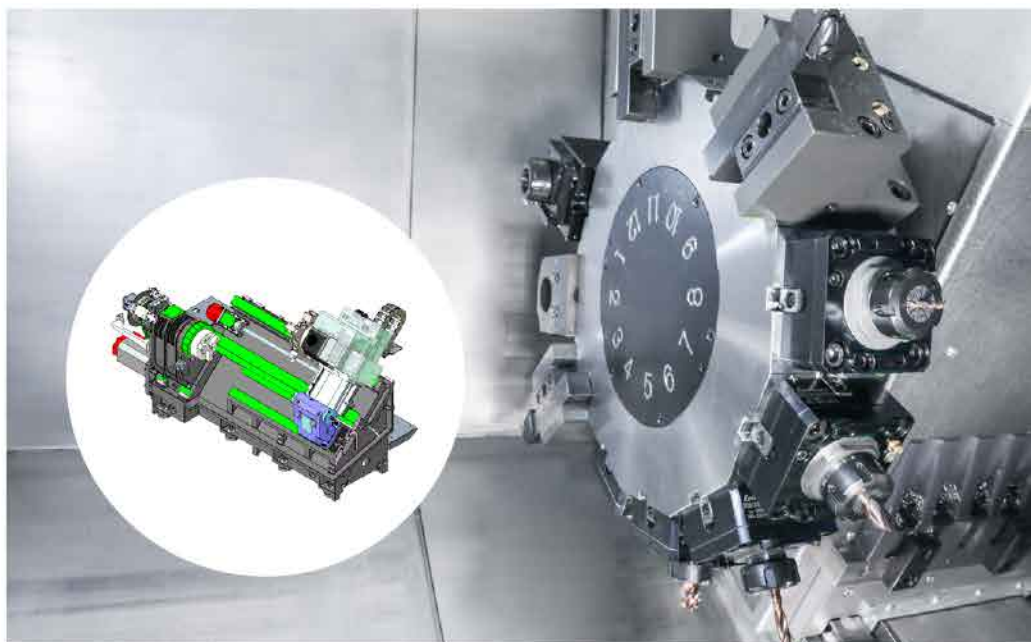
Hard jaws, special chuck, automatic tool measurement, steady rest, automatic door, additional tool attachment, air-blow mechanism, bar feeder, oil mist collector, oil skimmer, tailstock travel inspection, high-pressure coolant chip break, parts catcher.

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	Unit	NL161M	NL251M	NL252M	NL253M	NL403M	NL405M	NL502M	NL504M	NL634M	NL635M	NL636M	NL638M
Max. swing over bed	mm	Φ500	Φ550	Φ550	Φ550	Φ660	Φ660	Φ660	Φ660	Φ770	Φ770	Φ770	Φ770
Max. turning diameter	mm	Φ240	Φ290	Φ290	Φ290	Φ400	Φ400	Φ400	Φ400	Φ560	Φ560	Φ560	Φ560
Max. turning length	mm	320	240	460	725	700	1180	500	1000	960	1460	1960	2960
Max. spindle speed	rpm	6000	5000	5000	5000	3500	3500	3500	3500	2000	2000	2000	2000



1 Live Tool Driven Turret

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

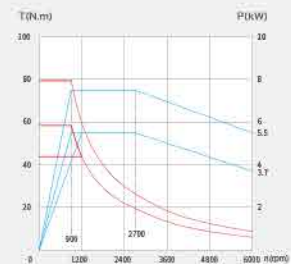
2 C Axis Index Positioning Function

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.

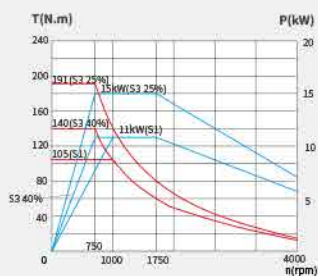
Spindle Power Torque Diagram

(Unit:mm)

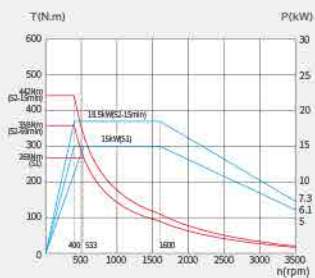
NL161M



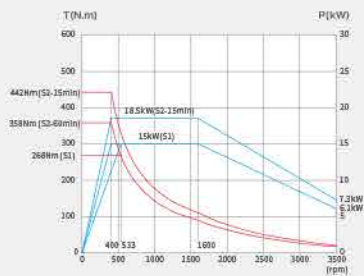
NL251M, NL252M, NL253M



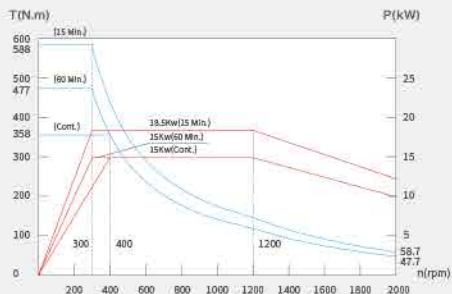
NL403M, NL405M



NL502M, NL504M

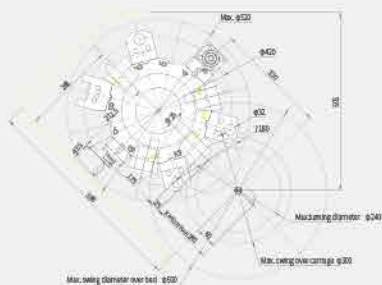


NL634M, NL635M, NL636M, NL638M

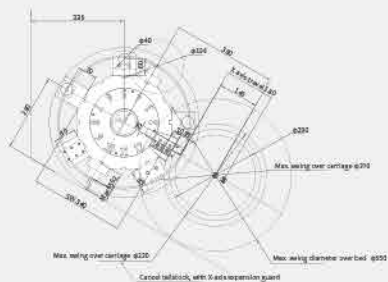


Tool Interference Diagram

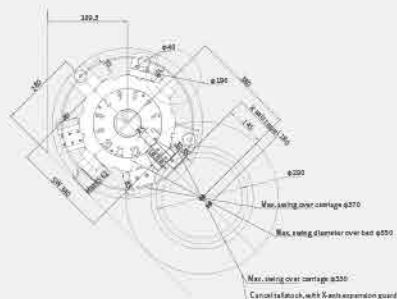
NL161M



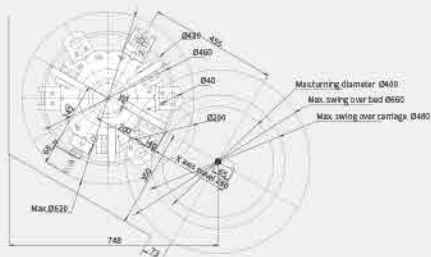
NL251M, NL252M



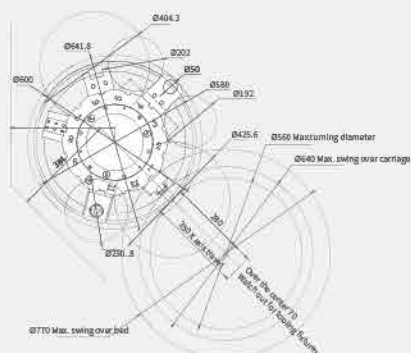
NL253M



NL502M, NL504M



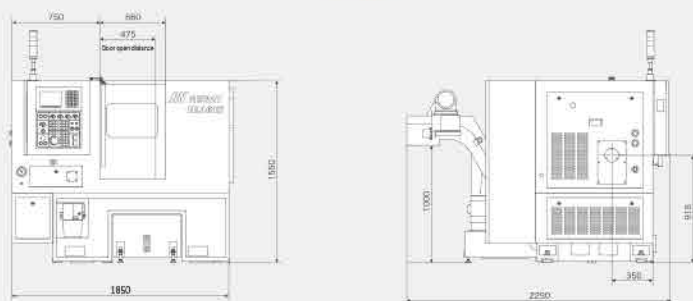
NL634M, NL635M, NL636M, NL638M



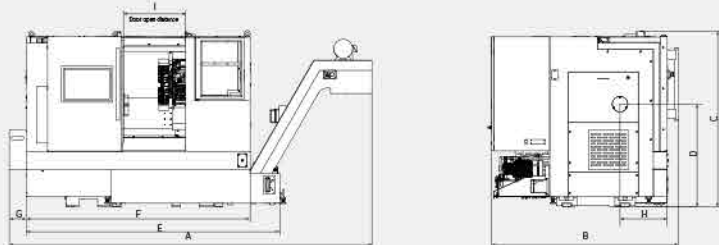
External Dimensions

(Unit:mm)

NL161M

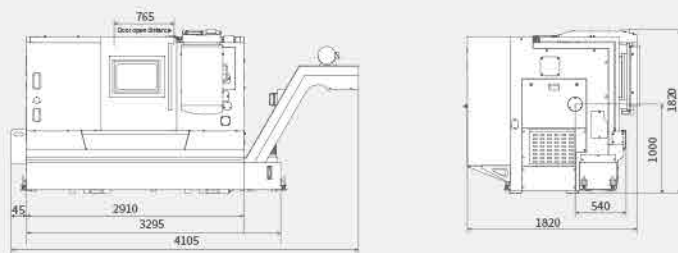


NL251M, NL252M

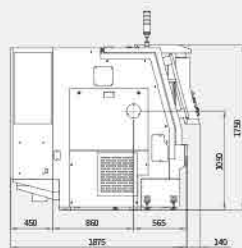
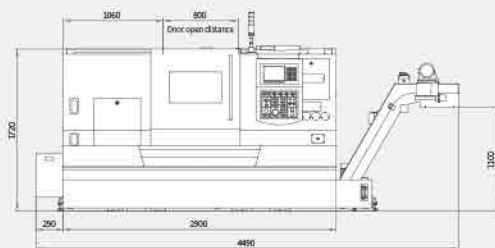


Models	A	B	C	D	E	F	G	H	I
NL251M	3530	1815	1710	1000	2465	2180	165	460	605
NL252M	3870	1815	1710	1000	2805	2520	165	460	725

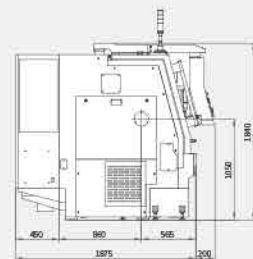
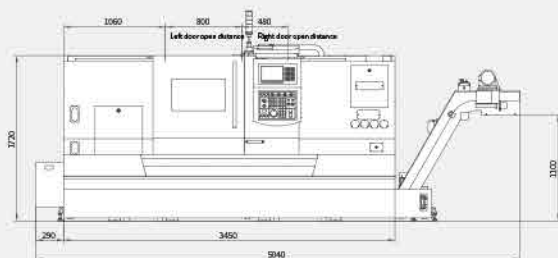
NL253M



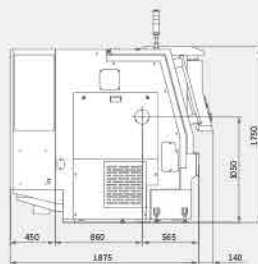
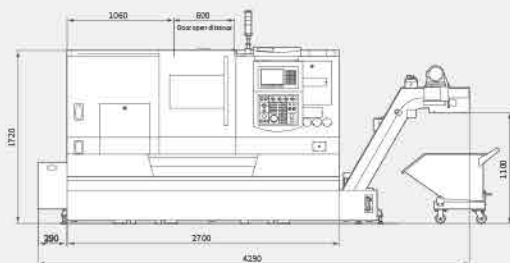
NL403M



NL405M



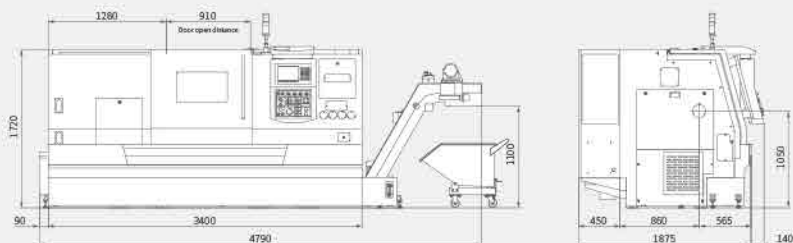
NL502M



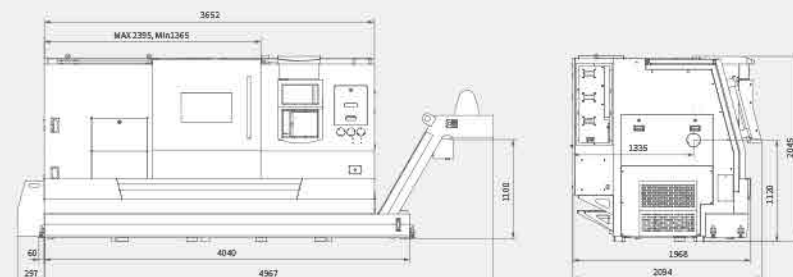
External Dimensions

(Unit:mm)

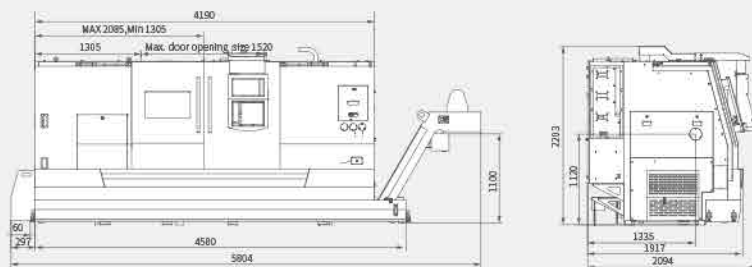
NL504M



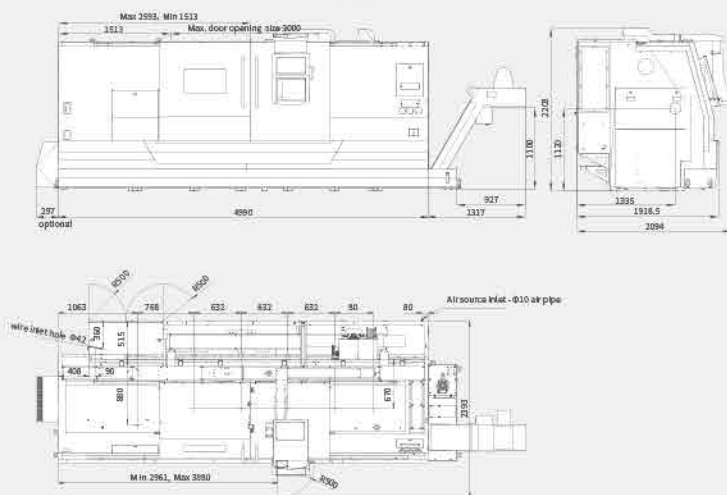
NL634M



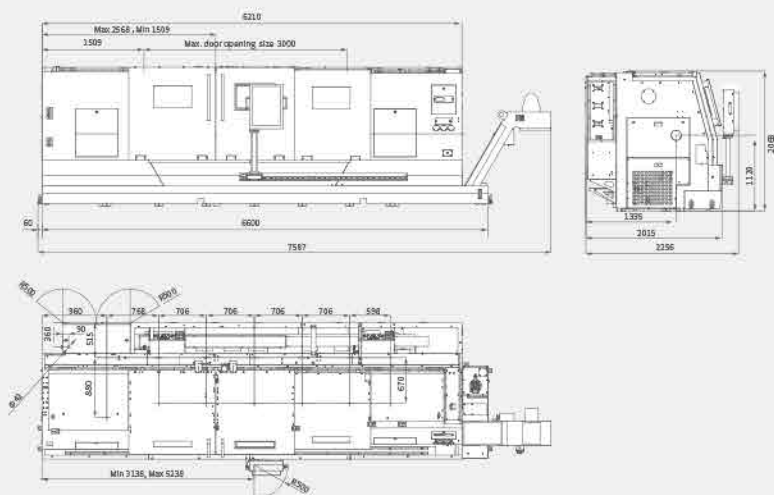
NL635M



NL636M



NL638M



Item	Unit	NL161M	NL251M	NL252M	NL253M	NL403M
Max. swing over bed	mm	Φ500	Φ550	Φ550	Φ550	Φ660
Max. swing over saddle	mm	Φ300	Φ330	Φ370	Φ370	Φ480
Max. turning diameter	mm	Φ240	Φ290	Φ290	Φ290	Φ400
Max. turning length	mm	240	240	460	725	700
Max. bar capacity	mm	Φ44	Φ51	Φ51	Φ51	Φ74
Max. spindle speed	rpm	6000	5000	5000	5000	3500
Spindle nose	ISO	A2-5	A2-6	A2-6	A2-6	A2-8
Spindle bore	mm	Φ56	Φ62	Φ62	Φ62	Φ86
Height from spindle center to ground	mm	915	1000	1000	1000	1050
Tailstock quill diameter	mm	-	-	Φ75	Φ100	Φ100
Tailstock quill travel	mm	-	-	80	100	100
Tailstock taper	Morse	-	-	4#(Live center)	5#(Live center)	5#(Live center)
Travel X/Z	mm	180/300	180/330	180/550	180/830	280/800
Rapid travel speed X/Z	m/min	30/30	24/30	24/30	24/30	24/30
X-axis screw diameter/pitch	mm	Φ32/10	Φ32/10	Φ32/10	Φ32/8	Φ32/8
Z-axis screw diameter/pitch	mm	Φ32/10	Φ32/12	Φ32/12	Φ32/10	Φ40/10
Tool position	-	12(BMT45)	BMT55	BMT55	BMT55	12(BMT55)
Max. live tool speed	mm	5000	4000	4000	4000	4000
Turning tool shank size	mm	25×25	25×25	25×25	25×25	25×25
Max. boring tool holder	mm	Φ32	Φ40	Φ40	Φ40	Φ40
Max. drilling capacity	mm	Φ12×0.14	Φ14×0.15	Φ14×0.15	Φ14×0.15	Φ14×0.16
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
Max. milling capacity	mm	Φ12×8×45	Φ16×12×40	Φ16×12×40	Φ16×12×40	Φ16×12×40
Machine power capacity	kVA	20	30	30	30	35
Machine dimension (L×W×H)	mm	1850×2250×1550	3530×1710×1655	3870×1710×1655	4160×1820×1820	4490(including right chip conveyor)×1880×1750
Machine weight	kg	2600	3200	3800	4200	4100
CNC system	-	NEWAY FANUC [SIEMENS]				
Spindle motor power	kW	5.5/7.5	11/15	11/15	11/15	15/18.5
Motor torque X/Z	N.m	7/7	11/11	11/11	11/11	11/11
Hydraulic chuck	inch	hollow 6" [solid 6"/solid (hollow)8"]	hollow 8" [solid 8"/solid (hollow)10"]	hollow 8" [solid 8"/solid (hollow)10"]	hollow 8" [solid 8"/solid (hollow)10"]	hollow 10" [solid 10"/solid (hollow)12"]
Automatic 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/Automatic rear 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]

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.

NL405M	NL502M	NL504M	NL634M	NL635M	NL636M	NL638M
Φ660	Φ660	Φ660	Φ770	Φ770	Φ770	Φ770
Φ480	Φ480	Φ480	Φ640	Φ640	Φ640	Φ640
Φ400	Φ400	Φ400	Φ560	Φ560	Φ560	Φ560
1180	500	1000	960	1460	1960	2960
Φ74	Φ74	Φ74	Φ74	Φ74	Φ89	Φ89
3500	3500	3500	2000	2000	2000	2000
A2-8	A2-8	A2-8	A2-8	A2-8	A2-11	A2-11
Φ86	Φ86	Φ86	Φ92	Φ92	Φ106	Φ106
1050	1050	1050	1120	1120	1120	1120
Φ100	Φ100	Φ100	Φ130	Φ130	Φ130	Φ130
100	100	100	120	120	120	120
5#(Live center)	5#(Live center)	5#(Live center)	5#	5#	5#	5#
280/1280	280/600	280/1100	350/1100	350/1600	350/2100	350/3100
24/30	16/20	16/20	12/16	12/16	12/16	12/10
Φ32/8	Φ32/8	Φ32/8	Φ40/10	Φ40/10	Φ40/10	Φ40/10
Φ40/10	Φ40/10	Φ40/10	Φ40/10	Φ40/10	Φ50/10	Φ50/12
12(BMT55)	12(BMT55)	12(BMT55)	12 (BMT65)	12 (BMT65)	12 (BMT65)	12 (BMT65)
4000	4000	4000	4000	4000	4000	4000
25×25	25×25	25×25	25×25	25×25	25×25	25×25
Φ40	Φ40	Φ40	Φ50	Φ50	Φ50	Φ50
Φ14×0.16	Φ14×0.16	Φ14×0.16	Φ16×0.2	Φ16×0.2	Φ16×0.2	Φ16×0.2
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
Φ16×12×40	Φ16×12×40	Φ16×12×40	Φ20×12×40	Φ20×12×40	Φ20×12×40	Φ20×12×40
35	35	35	35	35	35	35
5040(including right chip conveyor)×1880×1840	4290(including right chip conveyor)×1880×1750	4790(including right chip conveyor)×1750×1840	5030×2100×2050	5570×2100×2205	6610×2100×2210	7930×2250×2070
4600	4000	4500	7000	7500	8200	9300
NEWAY FANUC (SIEMENS)						
15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5
11/11	11/11	11/11	20/20	20/20	20/20	20/36
hollow 10" [solid 10"/solid (hollow)12"]	hollow 10" [solid 10"/solid (hollow)12"]	hollow 10" [solid 10"/solid (hollow)12"]	solid 12" [hollow 12"]	solid 12" [hollow 12"]	solid 12" [hollow 12"]	solid 12" [hollow 12"]
Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]

Optional on Neway Lathes:

[] Option

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.

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 equipped with the servo tail stock as option. Easy control and high efficiency.

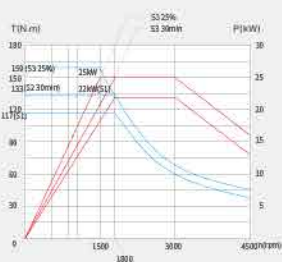
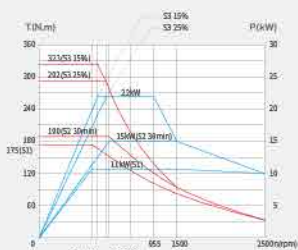


The main parameters	Unit	NL301Y	NL302Y	NLT322SY	NL403SY	NL403Y	NL40SY	NL634Y	NL63SY	NL636Y	NL636Y
Max. turning diameter	mm	Φ620	Φ620	Φ314	Φ660	Φ660	Φ660	Φ770	Φ770	Φ770	Φ770
Max. turning diameter	mm	Φ300	Φ300	Φ314	Φ300	Φ400	Φ400	Φ560	Φ560	Φ560	Φ560
Max. turning length	mm	300	550	550	600	700	1180	860	1360	1860	2860
Max. spindle speed	rpm	5000	5000	4500	3500	3500	3500	2000	2000	2000	2000
Max. Sub-spindle speed	rpm	-	-	4500	4500	-	-	-	-	-	-

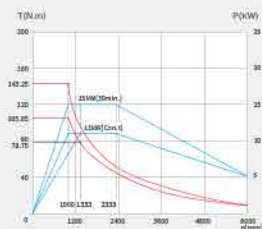
Spindle Power Torque Diagram

(Unit:mm)

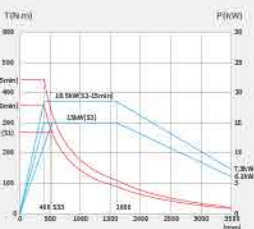
NLT322SY



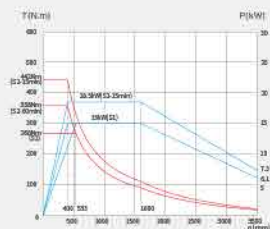
NL301Y, NL302Y



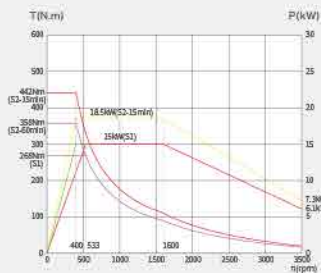
NL403SY



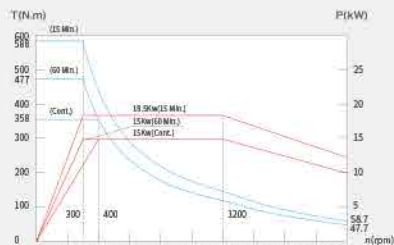
NL403Y, NL405Y



NL502Y, NL504Y

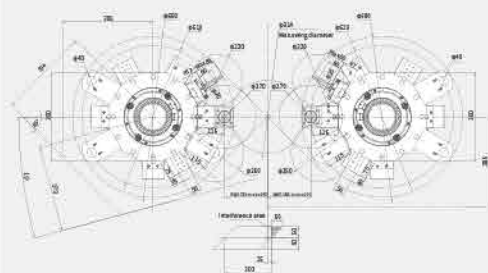


NL634Y, NL635Y, NL636Y, NL638Y

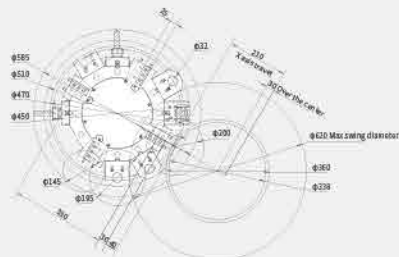


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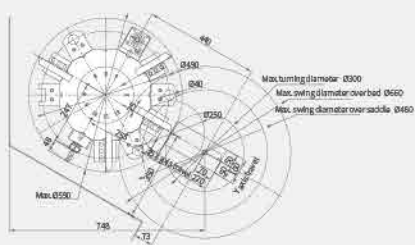
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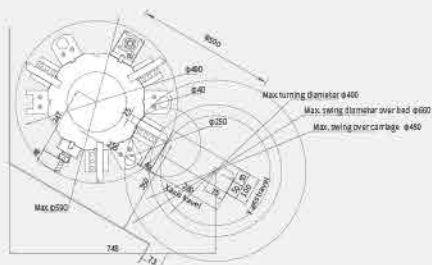
NL301Y、NL302Y



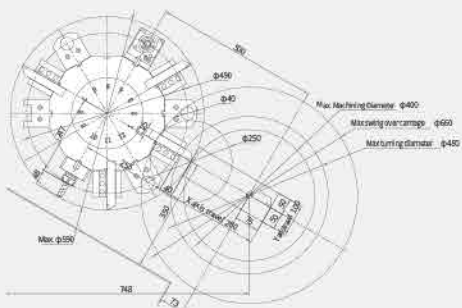
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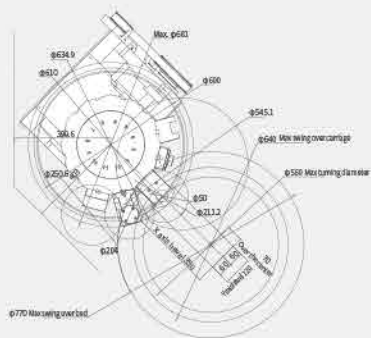
NL403Y、NL405Y



NL502Y、NL504Y



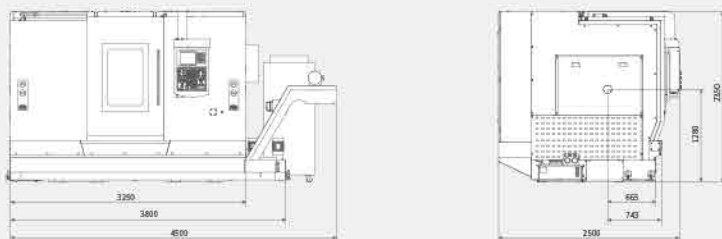
NL634Y、NL635Y、NL636Y、NL638Y



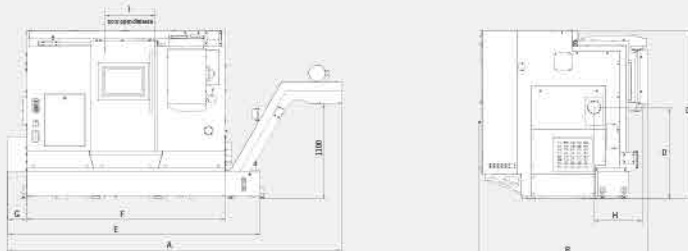
External Dimensions

(Unit:mm)

NLT322SY

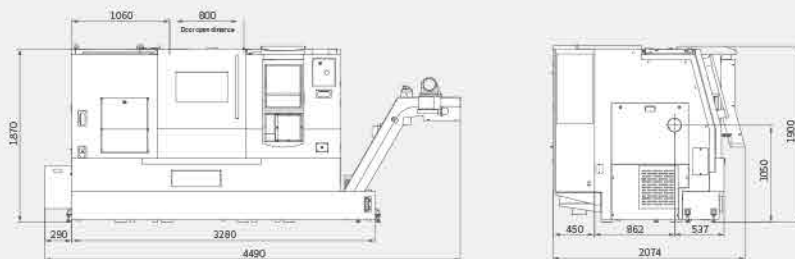


NL301Y, NL302Y



Models	A	B	C	D	E	F	G	H	I
NL301Y	3855	1940	1950	1060	2915	2300	215	460	580
NL302Y	4105	1940	1950	1090	3165	2700	65	460	730

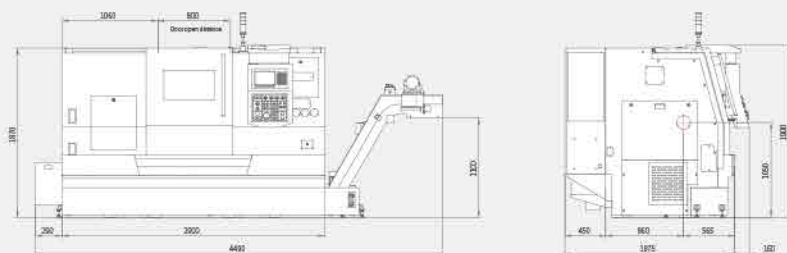
NL403SY



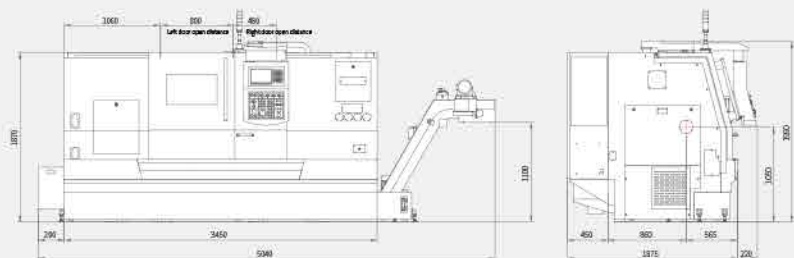
External Dimensions

(Unit:mm)

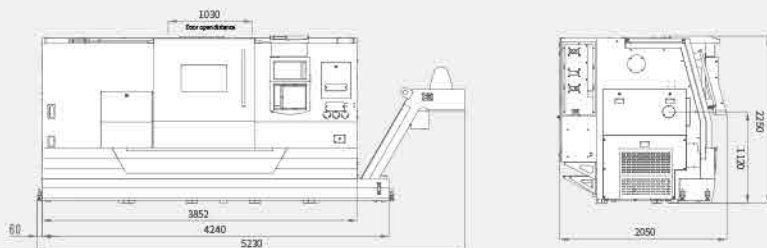
NL403Y



NL405Y



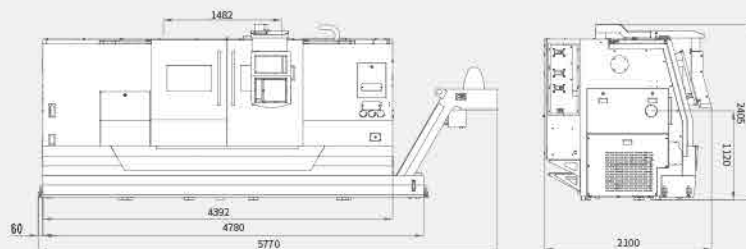
NL634Y



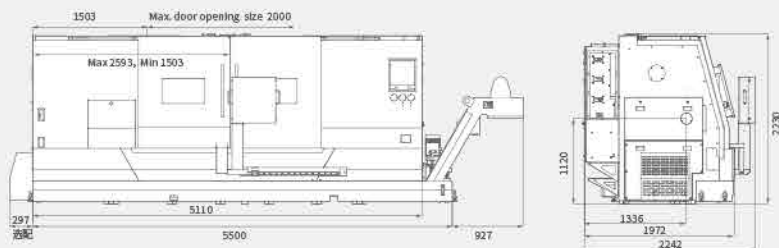
External Dimensions

(Unit:mm)

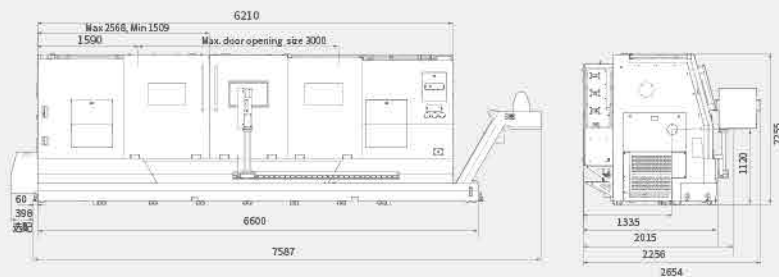
NL635Y



NL636Y



NL638Y



Item			Unit	NLT322SY	NL301Y	NL302Y	NL403SY	NL403Y
Processing range	Max. turning diameter		mm	Φ314	Φ620	Φ620	Φ660	Φ660
	Max. turning diameter		mm	Φ314	Φ300	Φ300	Φ300	Φ400
	Max. turning length		mm	550	300	550	600	700
Spindle	Max. spindle speed		rpm	4500	5000	5000	3500	3500
	Spindle power		kW	Built-in motor22/25	11/15	11/15	15/18.5	15/18.5
	Spindle nose		ISO	A2-6	A2-6	A2-6	A2-8	A2-8
	Spindle bore		mm	Φ66	Φ62	Φ62	Φ86	Φ86
	Max. bar capacity		mm	Φ51	Φ51	Φ51	Φ74	Φ74
	Hydraulic chuck		inch	8 (hollow)	8 (hollow)	8 (hollow)	10 (solid)	10 (solid)
	Height from spindle center to ground		mm	1280	1060	1060	1050	1050
Sub-spindle	Max. spindle speed		rpm	4500	-	-	4500	-
	Spindle power		kW	Built-in motor22/25	-	-	5.5/7.5	-
	Spindle nose		ISO	A2-6	-	-	A2-5	-
	Spindle bore		mm	Φ66	-	-	Φ56	-
	Max. bar capacity		mm	Φ51	-	-	Φ45	-
	Tailstock taper		-	公制 80	-	-	/	-
X&Z&Y axis	Hydraulic chuck		inch	8 (hollow)	-	-	6 (solid)	-
	Travel			650	-	-	700	-
	Travel	X1/X2	mm	200	210 (X)	210 (X)	220	280 (X)
		Z1/Z2	mm	650	400 (Z)	600 (Z)	700	800 (Z)
		Y	mm	100(±50)	105(±52.5)	105(±52.5)	100 (±50)	100 (±50)
	Travel speed	X1/X2	m/min	30	30 (X)	30 (X)	24	24 (X)
		Z1/Z2	m/min	36	30 (Z)	30/10 (Z1/Z2)	30	30 (Z)
Y		m/min	15	10	10	10	10	
Living turret	Tool position		mm	12×2 (BMT65)	12 (BMT55)	12 (BMT55)	12 (BMT55)	12 (BMT55)
	Max. live tool speed		rpm	5000	4000	4000	4000	4000
	Turning tool shank size		mm	25×25	25×25	25×25	25×25	25×25
	Max. boring tool holder		mm	Φ40	Φ40	Φ40	Φ40	Φ40
	Max. drilling capacity		mm	Φ16×0.2	Φ14×0.15	Φ14×0.15	Φ14×0.15	Φ14×0.15
	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
Other	Max. milling capacity		mm	Φ20×12×40	Φ16×12×40	Φ16×12×40	Φ16×12×40	Φ16×12×40
	Machine power capacity		kVA	80	25	30	45	35
	Machine dimension (L×W×H)		mm	4500×2500×2350	3855×1940×1950 (including Chip removal machine)	4105×1940×1950 (including Chip removal machine)	4490×1880×1900 (including Chip removal machine)	4490×1880×1900 (including Chip removal machine)
	Machine weight		kg	8500	3800	4200	4500	4200
	CNC system		-	NEWAY FANUC				
	Motor torque X/Y/Z		N.m	12	11	11	11	11
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][Automatic rear 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.

NL405Y	NL502Y	NL504Y	NL634Y	NL635Y	NL636Y	NL638Y
Φ660	Φ660	Φ660	Φ770	Φ770	Φ770	Φ770
Φ400	Φ400	Φ400	Φ560	Φ560	Φ560	Φ560
1180	500	1000	860	1360	1860	2860
3500	3500	3500	2000	2000	2000	2000
15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5
A2-8	A2-8	A2-8	A2-8	A2-8	A2-11	A2-11
Φ86	Φ86	Φ86	Φ92	Φ92	Φ106	Φ106
Φ74	Φ74	Φ74	Φ74	Φ74	Φ89	Φ89
10 (solid)	10 (中实)	10 (中实)	12 (solid)	12 (solid)	12 (solid)	12 (solid)
1050	1050	1050	1120	1120	1120	1120
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
280 (X)	280 (X)	280 (X)	350 (X)	350 (X)	350 (X)	350 (X)
1280 (Z)	600 (Z)	1100 (Z)	960 (Z)	1460 (Z)	1960 (Z)	2960 (Z)
100 (±50)	100 (±50)	100 (±50)	120 (±60)	120 (±60)	120 (±60)	120 (±60)
24 (X)	16 (X)	16 (X)	12 (X)	12 (X)	12 (X)	12 (X)
30 (Z)	20 (Z)	20 (Z)	16 (Z)	16 (Z)	16 (Z)	10 (Z)
10	10	10	8	8	8	8
12 (BMT55)	12 (BMT55)	12 (BMT55)	12 (BMT65)	12 (BMT65)	12 (BMT65)	12 (BMT65)
4000	4000	4000	4000	4000	4000	4000
25×25	25×25	25×25	25×25	25×25	25×25	25×25
Φ40	Φ40	Φ40	Φ50	Φ50	Φ50	Φ50
Φ14×0.15	Φ14×0.15	Φ14×0.15	Φ16×0.2	Φ16×0.2	Φ16×0.2	Φ16×0.2
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
Φ16×12×40	Φ16×12×40	Φ16×12×40	Φ20×12×40	Φ20×12×40	Φ20×12×40	Φ20×12×40
35	35	35	35	35	55	55
5040×1880×1990 (including Chip removal machine)	4290×1880×1900 (including Chip removal machine)	4790×1880×1900 (including Chip removal machine)	5400×2050×2350 (including Chip removal machine)	5810×2100×2390 (including Chip removal machine)	6890×2245×2440 (including Chip removal machine)	8020×2350×2450 (including Chip removal machine)
4700	4100	4600	7100	7600	8300	9400
NEWAY FANUC						
11	11	11	20/11/20	20/11/20	20/11/20	20/11/36
Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]	Automatic right chip conveyor [Automatic left chip conveyor]

[] Option

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.

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.



The main parameters	Unit	NL03GY	NL161G
Max. swing over bed	mm	Φ300	Φ520
Max. turning diameter	mm	-	-
Max. turning length	mm	100	300
Max. spindle speed	rpm	6000	5000

Item		Unit	NL03GY	NL161G
Processing range	Max. swing over bed	mm	Φ300	Φ520
	Max. swing over saddle	mm	Φ70	Φ110
	Max. turning diameter	mm	-	-
	Max. turning length	mm	100	300
	Max. bar capacity	mm	Φ30	Φ39
Spindle	Max. spindle speed	rpm	6000	5000
	Spindle nose	ISO	A2-4	A2-5
	Spindle bore	mm	Φ43	Φ46
	Height from spindle center to ground	mm	1000	1000
Hydraulic tailstock	Tailstock quill diameter	mm	-	-
	Tailstock quill travel	mm	-	-
	Tailstock taper	Morse	-	-
Axis X&Z	Travel X/Z	mm	280/280	400/350
	Rapid travel speed X/Z	m/min	18/18	24/24
	X-axis screw diameter/pitch	mm	Φ25/10	Φ25/10
	Z-axis screw diameter/pitch	mm	Φ25/10	Φ32/10
Y axis	Travel Y	-	115	-
	Travel speed Y	mm	18	-
	Y-axis screw diameter/pitch	mm	Φ25/10	-
Gang tooling system	tool capacity		1 ~ 6	1 ~ 4
	Turning tool shank size		16×16	20×20
	Max. Boring tool holder diameter		Φ25	Φ25
Other	Machine power capacity	kVA	20	20
	Machine dimension (L x W x H)	mm	1450×2400×1755	1965×1690×1710
	Machine weight	kg	1750	2350
	CNC system	-	FANUC	GSK 988TA
	Spindle motor power	kW	3.7/5.5	5.5/7.5
	Motor torque X/Z	N.m	3.5/3.5	7.16/7.16
	Hydraulic chuck	inch	hydraulic collet Φ30	solid(hollow)6"/ solid (hollow)8"
	[Hydraulic steady rest]	mm	-	-
	Automatic chip conveyor	-	Automatic rear chip conveyor	Manual chip removal [Automatic rear chip conveyor]

Standard on Neway Lathes:

Cooling unit, mounting tools, lubrication unit, standard tool attachment, foot switch, standard chuck cylinder, soft jaws, hydraulics, air gun, tri-colour light, chip catcher, full enclosure protection, waste oil recycling unit, lighting;

Optional on Neway Lathes:

Hard jaws, special chucks, tool setting gauges, automatic doors, additional tool attachments, blowing cleaning devices, electric cabinet air conditioning, bar conveyors, oil mist collectors, oil-water separators, individual customer requirements.

[.] Option

NC series- CNC Horizontal Lathe

- Integral inclined bed design, high rigidity, smoother chip discharge;
- Finite element structural analysis, casting bar layout is reasonable, good stress effect;
- X/Z axis screws are pre-drawn structure, which can reduce the effect of temperature rise on the precision of the screws during the machining process, and the servo motors are directly connected to drive the high-speed and silent ball screws;
- Newway self-designed one-piece high rigidity spindle box, low noise, high precision and long life;
- Imported functional parts, equipped with servo AC motor, good system performance, good controllability, high spindle rotation accuracy;
- Wide range of options: e.g. feeders, receivers, hollow chucks, enlarged spindle through-holes, tool setting gauges, etc.



The main parameters	Unit	NC3633	NC3655	NC5055
Max. swing over bed	mm	Φ550	Φ550	Φ660
Max. turning diameter	mm	Φ360	Φ360	Φ500
Max. turning length	mm	330	550	550
Max. spindle speed	rpm	4000	4000	4000

Item		Unit	NC3633	NC3655	NC5055
Processing range	Max. swing over bed	mm	Φ550	Φ550	Φ660
	Max. swing over saddle	mm	Φ330	Φ370	Φ480
	Max. turning diameter	mm	Φ360	Φ360	Φ500
	Max. turning length	mm	330	550	550
	Chuck size	inch	8	8	8
Travel	X-axis	mm	210	210	280
	Z-axis	mm	330	550	600
	X-axis rapid traverse speed	m/min	24	24	16
	Z-axis rapid traverse speed	m/min	30	30	20
spindle	Max. spindle speed	rpm	4000	4000	4000
	Spindle power (cont. / max.)	kW	11/15	11/15	11/15
	Spindle nose type	ISO	A2-6	A2-6	A2-6
	Fore axis dimension of spindle	mm	100	100	100
	Spindle bore	mm	Φ62	Φ62	Φ62
Hydraulic tailstock	Tailstock quill diameter	mm	[Φ75]	Φ75	Φ100
	Tailstock quill travel	mm	[80]	80	100
	Tailstock taper	Morse	[4]	4	5
Turret	Tool position	ea	8	8	8
	square shank dimension	mm	25×25	25×25	25×25
	round shank dimension	mm	Φ40	Φ40	Φ40
	tool indexing time	sec	0.5	0.5	0.5
Other	Motor torque X/Z	N.m	9.55/9.55	9.55/9.55	9.55/9.55
	Cooling water pump motor power	kW	0.37	0.37	0.37
	CNC system	-	GSK 988TA	GSK 988TA	GSK 988TA
	total power capacity	kVA	25	25	25
	Machine dimension (L x W x H)	mm	2750×1815×1710	3090×1815×1710	3370×1880×1750
	Machine weight	kg	3000	3600	3800

[.] Option

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.

NLR series- Hard turning CNC lathe

- L-shaped low centre of gravity 30° integral slanting bed, excellent structural rigidity and heavy cutting capacity
- Drive axis screws are pre-drawn to reduce the impact of temperature rise on screw accuracy during machining.
- One-piece rectangular hard-rail structure, large span of the guideway, the use of imported plastic guideway materials, to ensure good motion accuracy and dynamic characteristics of the lathe.
- Servo-following tool holder structure to meet the high efficiency machining of long and thin shaft parts.
- 12-station self-developed servo toolholder to improve machining efficiency and ensure excellent toolholder quality and best mechanical properties.

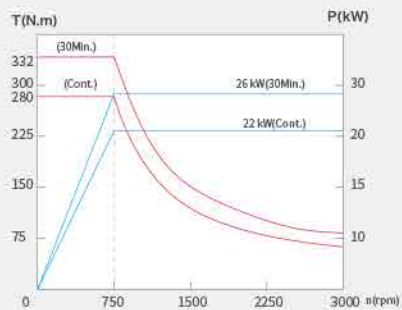


The main parameters	Unit	NLR506
Max. turning diameter	mm	Φ500
Max. turning length	mm	2150
Max. spindle speed	mm	3000
Travel X/Z/Z2	kW	300/2200/1520
Spindle motor power	rpm	22/26

Spindle Power Torque Diagram

(Unit:mm)

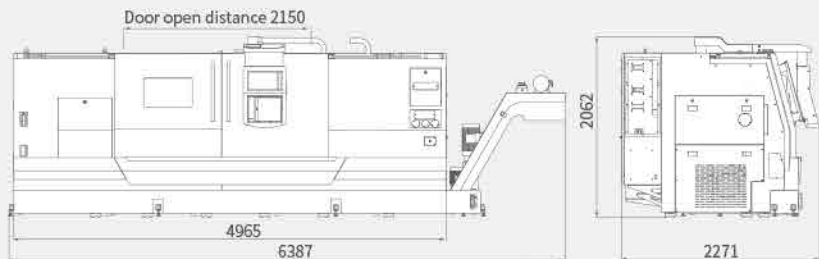
NLR506



External Dimensions

(Unit:mm)

NLR506



Item		Unit	Unit	NLR506
Processing range	Max. swing over bed		mm	Φ660
	Max. swing over saddle		mm	Φ480
	Max. turning diameter		mm	Φ500
	Max. turning length		mm	2150
	Max. bar capacity		mm	Φ74
Spindle	Max. spindle speed		rpm	3000
	Spindle nose		ISO	A2-8
	Spindle bore		mm	Φ92
	Height from spindle center to ground		mm	1120
Hydraulic tailstock	Tailstock quill diameter		mm	Φ100
	Tailstock quill travel		mm	150
	Tailstock taper		Morse	4#(Dead center)
X& Z axis	Travel X/Z/Z2		mm	300/2200/1520
	Rapid travel speed X/Z/Z2		m/min	16/16/16
	X-axis screw diameter/pitch		mm	Φ40/10
	Z-axis screw diameter/pitch		mm	Φ50/10
	Z-axis screw diameter/pitch		mm	Φ45/12
Turret	Tool position		-	12
	Turning tool shank size		mm	25 × 25
	Boring tool holder diameter		mm	Φ40
Other	Machine power capacity		kVA	55
	Machine dimension (L x W x H)		mm	6390 × 2320 × 2070
	Machine weight		kg	7500
	CNC system		-	NEWAY FANUC
	Spindle motor power		kW	22/26
	Motor torque X/Z/Z2		N.m	12/30/12
	Hydraulic chuck			solid (hollow)12"
	[Hydraulic steady rest]		mm	Φ80
	Automatic chip conveyor		-	Automatic right chip conveyor

[] Option

Specialised machines

NLD252—Horizontal lathe with differential case control

- Mechanical, electrical and hydraulic integrated layout, the overall 30-degree low-centre of gravity inclined bed design, good rigidity, good stability, smooth chip removal.
- The X-axis screw is pre-drawn to reduce the effect of temperature rise on the precision of the screw during the machining process.
- The key parts adopt imported famous brand workhorses for finishing, effectively guaranteeing the accuracy of key parts.
- Adoption of internationally renowned brand functional components, greatly improving the reliability of machine tools
- Equipped with a highly reliable 6-station servo differential housing machining tool holder, to achieve the tool holder and X, Z axis linkage, to meet the machining requirements.
- Compact machine, small footprint, efficient use of customer space

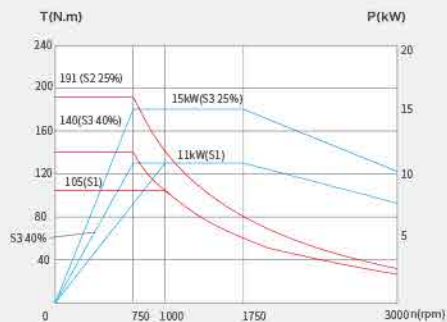


The main parameters	Unit	NLD252
Max. turning diameter	mm	Φ320
Max. turning length	mm	500
Max. spindle speed	mm	3000
Travel X/Z	kW	240/550
Spindle motor power	rpm	11/15
spindle torque	N	105/191

Spindle Power Torque Diagram

(Unit:mm)

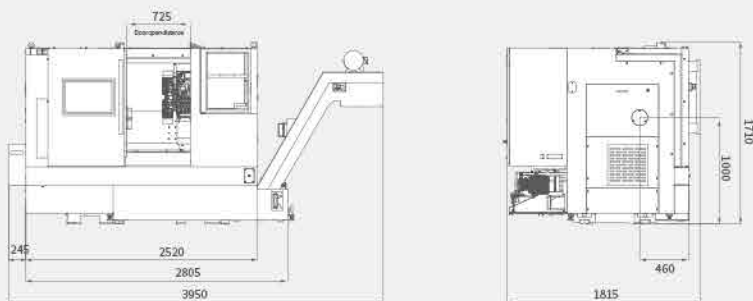
NLD252



External Dimensions

(Unit:mm)

NLD252



Item		Unit	NLD252
Processing range	Max. swing over bed	mm	Φ550
	Max. swing over saddle	mm	Φ370
	Max. turning diameter	mm	Φ320
	Max. turning length	mm	500
	Max. bar capacity	mm	Φ81
Spindle	Max. spindle speed	rpm	3000
	Spindle nose	ISO	A2-8
	Spindle bore	mm	Φ92
	Height from spindle center to ground	mm	1000
Axis X/Z	Travel X/Z	mm	240/550
	Rapid travel speed X/Z	m/min	30/36
	X-axis screw diameter/pitch	mm	Φ32/10
	Z-axis screw diameter/pitch	mm	Φ32/12
Turret	Tool position	-	6
	Turning tool shank size	mm	-
	Boring tool holder diameter	mm	Φ32
Other	Machine power capacity	kVA	25
	Machine dimension (L x W x H)	mm	3870 x 1710 x 1655
	Machine weight	kg	3800
	CNC system	-	FANUC
	Spindle motor power	kW	11/15
	Motor torque X/Z	N·m	11/11
	Hydraulic chuck	inch	[Customized fixtures]
	Automatic chip conveyor	-	Automatic right chip conveyor [Automatic rear chip conveyor] [Automatic left chip conveyor]

[] Option

Specialised machines

NL660W—Wheel turning CNC horizontal lathe

- L-type overall 45-degree inclined bed design, high rigidity, convenient chip removal;
- The drive axis screws are pre-tensioned to reduce the effect of temperature rise on the accuracy of the screws during the machining process;
- One-piece hard rail design, HRC48 hardness surface heat treatment. Guideway span is large, with low friction, wear-resistant imported paste plastic guideway material, with good motion accuracy and dynamic characteristics;
- Equipped with 160mm centre height hydraulic tool holder;
- Specialised protective structure for wheel turning;

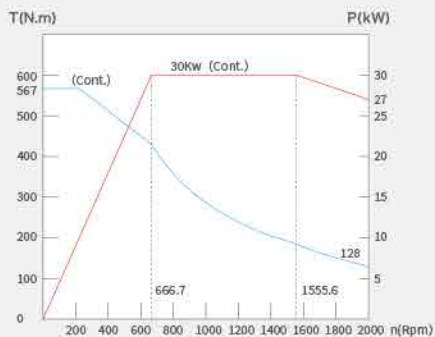


The main parameters	Unit	NL660W
Max. turning diameter	mm	Φ670
Max. turning length	mm	720
Max. spindle speed	mm	2000
Axis X/Z	kW	350/890
Spindle motor power	rpm	30
spindle torque	N	420

Spindle Power Torque Diagram

(Unit:mm)

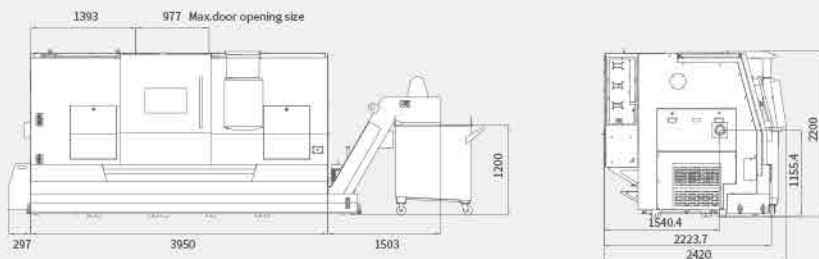
NL660W



External Dimensions

(Unit:mm)

NL660W



Item		Unit	NL660W
Processing range	Max. swing over bed	mm	Φ800
	Max. swing over saddle	mm	Φ640
	Machine bed tilting angle	°	45
	Max. turning diameter	mm	Φ670
	Max. turning length	mm	720
	Standard Machined Aluminum Rings	inch	23
	Guideway type		Box guideway
Spindle	Max. spindle speed	rpm	2000
	Rated spindle torque	N.m	420
	Spindle nose	ISO	A2-11
	Spindle bore	mm	Φ106
	Height from spindle center to ground	mm	1120
Axis X/Z	Travel X/Z	mm	350/890
	Rapid travel speed X/Z	m/min	12/16
Turret	Tool position	-	12
	Drive form		hydraulic
	tool post center height	mm	160
	Turning tool shank size	mm	32×32
	Boring tool holder diameter	mm	Φ60
Other	Machine power capacity	kVA	45
	Machine dimension (L x W x H)	mm	5750×2420×2200
	Machine weight	kg	6800
	CNC system		SIEMENS 828D
	Spindle motor power	kW	30
	Motor torque X/Z	N·m	22/22
	Automatic chip conveyor	-	Automatic right chip conveyor[Automatic left chip conveyor]

[.] Option

Optional on Neway Lathes:

lighting device, automatic chip removal, cooling system, automatic lubrication system, fully enclosed protection, air blowing device, electrical cabinet air conditioner, three-color light

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 and related 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.



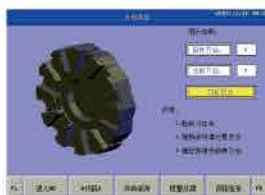
4 Chuck control

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



NL402

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



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