NEWAY

NL161

CNC Horizontal Lathe

H/E- Rolling Guideway
V/LV- Built-in Spindle
L- High Efficiency
T- Turning Center

Cat.NO.: E-NL16-2019-01

Basic Design

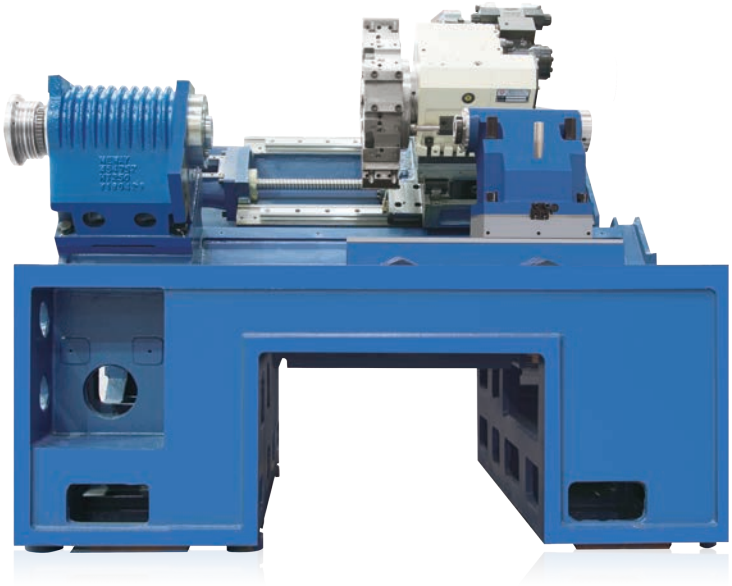
Electromechanical integration design, adopted 45° whole slant bed structure, and through the finite element analysis(FEA), the main structure to achieve optimization, make it has excellent rigidity, heat inhibition and vibration absorption, can maintain high stability, high precision for a long time, extend the working life of the tools.

Max. machining diameter
Φ320mm

Main Motor Power
7.5/5.5 kW

X/Y Axis Travel
180/350m/min

X/Z Rapid Speed
30/30m/min



Spindle

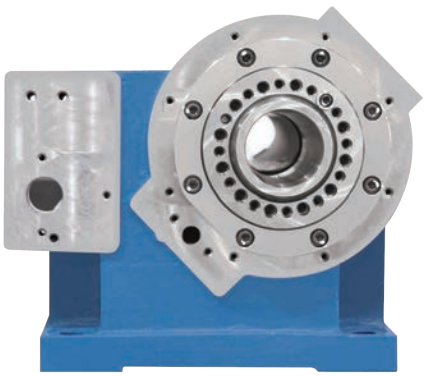
- Independent designed spindle, front and rear bearing support by finite element structure optimized, to ensure excellent rigidity and precision;
- Spindle bearing mounting surface and locking nut mounting thread, finished through a grinding molding, to ensure the spindle and the headstock mounting with precision, improve the spindle speed and stability;
- All spindle bearings are imported P4 level machine tool special bearings, using grease lubrication, good precision retention, longer working life.

Max. Spindle Speed
6000 r/min

Spindle Nose
A2-5

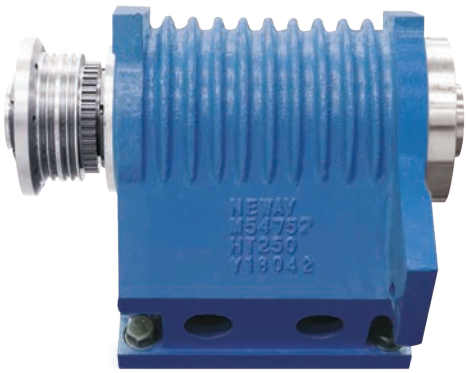
Spindle Bore
Φ56mm

Bar Through Spindle Capacity
Φ45mm



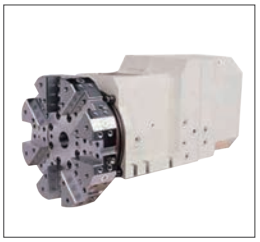
Headstock

- The headstock adopted thermal symmetry design, combined with a wide range of heat dissipation structure, greatly reduce the deformation of machine tool due to heat, improve the accuracy;
- The front and rear bearing hole of headstock is finished machining through the world class horizontal boring machine, to ensure its excellent coaxiality and excellent to improve the spindle speed and precision.



Turret

- The servo turret is standard, drive by servo motor, high positioning accuracy, two-way rotation available, faster tool change speed, big hydraulic clamping force, heavy cutting without vibration, to realize processing automation and high efficiency at extreme;
- Power turret is standard for NL161T, three-plate curved tooth clutch structure, to ensure positioning accuracy, repeat positioning accuracy up to 0.003mm;

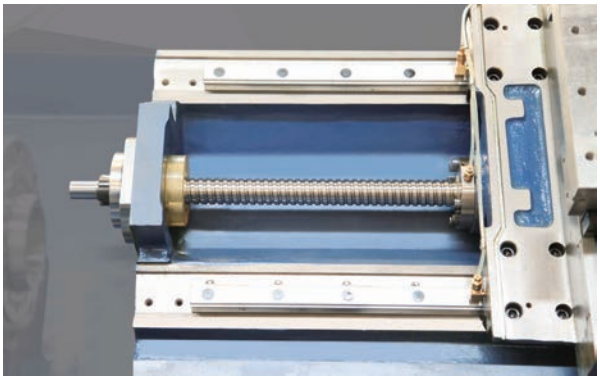


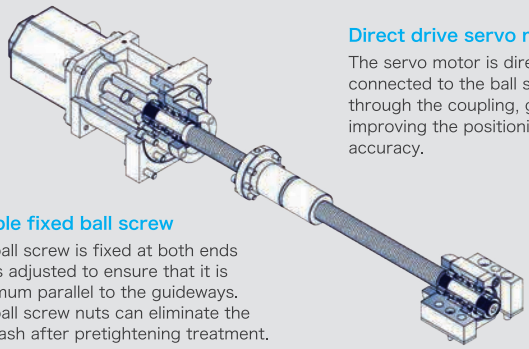
- Servo turret

- Power turret VDI disc

Feeding System

- Adopted high-speed silenced double nut ball screw, ball screw support with bearings, and the application of pretension, strengthening the rigidity and thermal deformation resistance;
- Equipped with high-performance linear guide rail, with 30m/min fast feed speed, fully improve productivity.





Direct drive servo motor

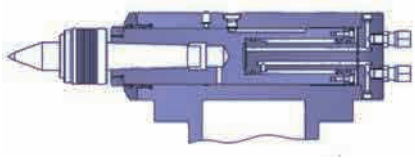
The servo motor is directly connected to the ball screw through the coupling, greatly improving the positioning accuracy.

Double fixed ball screw

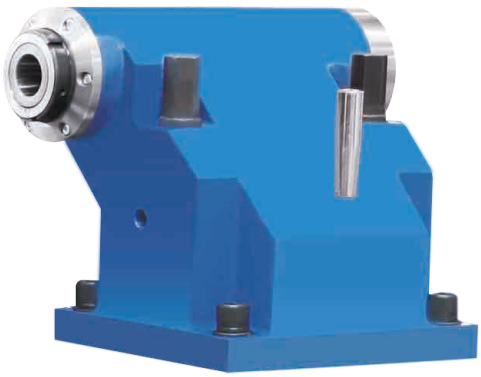
The ball screw is fixed at both ends and is adjusted to ensure that it is maximum parallel to the guideways. The ball screw nuts can eliminate the backlash after pretightening treatment.

Tailstock

- Hydraulic tailstock is optional for NL161H/E/V, which activated by the program or control through the standard foot switch;
- Servo tailstock is standard for NL161L/LV, which adopted linear guideways, control the tailstock movement and jacking force through servo motor, simplized the operation and preparation process.



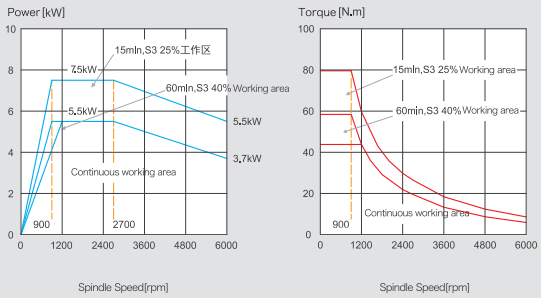
The jacking force of MT4 live center up to 3Kn.



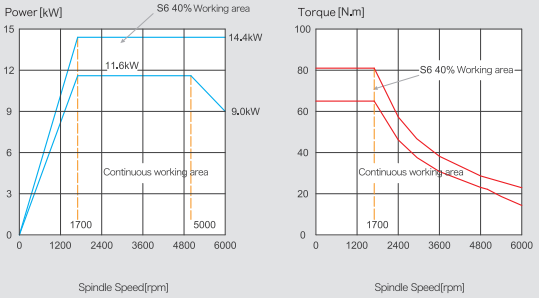
Spindle Power Torque Diagram | Tool Interference Diagram | External Dimensions

(Unit: mm)

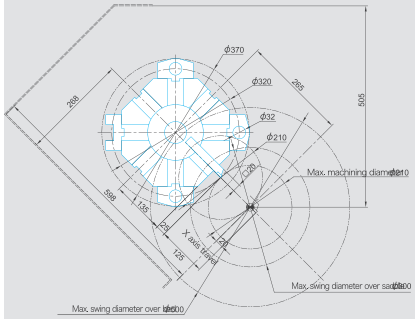
NL161H/E/L/T



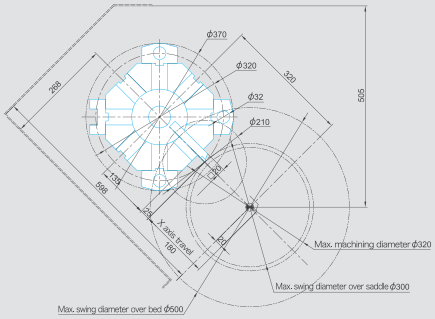
NL161V/LV



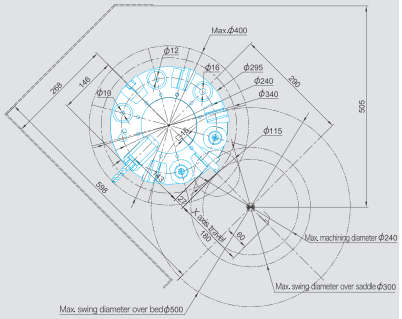
NL161H



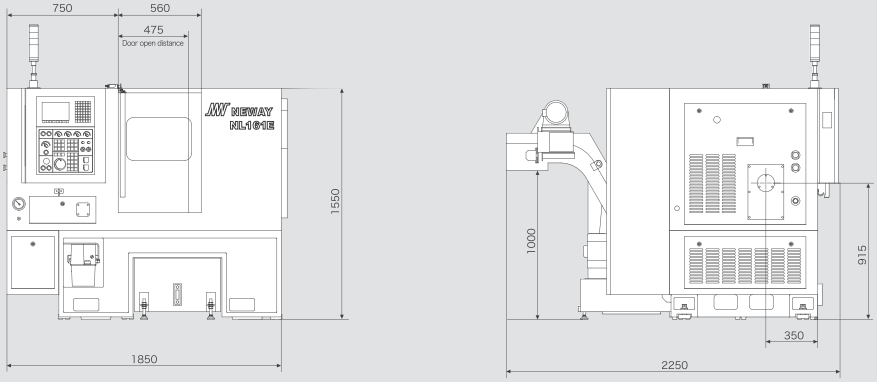
NL161E/V/L/LV



NL161T



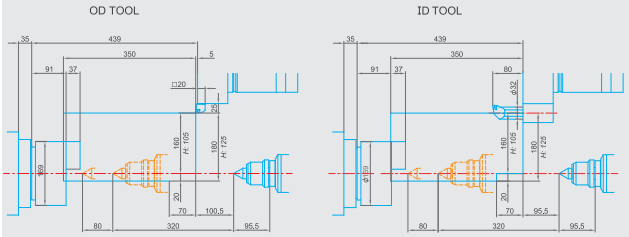
NL161H/E/V/L/LV/T



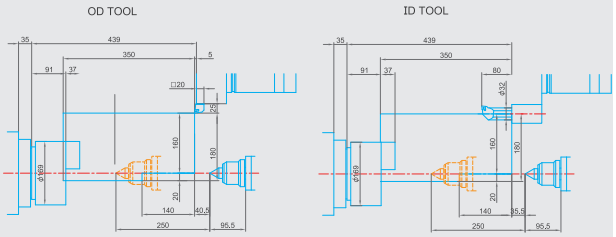
Machining Area Diagram

(Unit: mm)

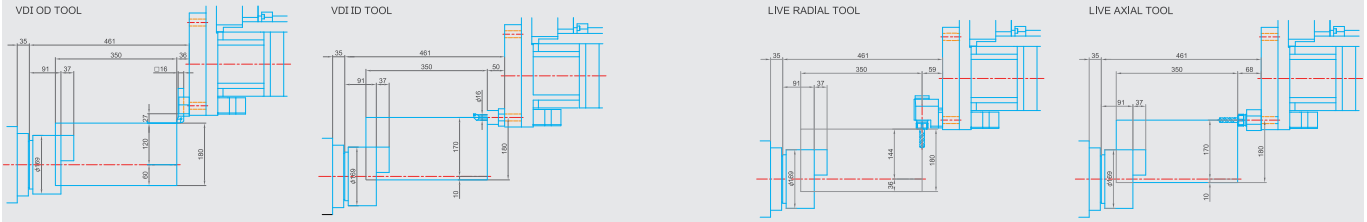
NL161H/E/V



NL161L/LV



NL161T



Machine Configuration

Item	Configuration	NL161H	NL161E	NL161V	NL161L	NL161LV	NL161T
Chuck	6"	●	●	●	●	●	●
	8"	○	○	○	○	○	○
Jaw	Soft jaw	●	●	●	●	●	●
	Hard jaw	○	○	○	○	○	○
Tailstock	Hydraulic (live center MT#4)	○	○	○	×	×	×
	Servo (live center MT#4)	×	×	×	●	●	×
Clamping	Chuck clamping confirmation	○	○	○	○	○	○
Cooling Pump	1.5 bar	●	●	●	●	●	●
	2.4 bar	○	○	○	○	○	○
	4.8 bar	○	○	○	○	○	○
Rear Chip Conveyor	Chain type	●	●	●	●	●	●
	Megnetic type	○	○	○	○	○	○
	Screw type	○	○	○	○	○	○
Right chip conveyor	Chain type	●	●	●	●	●	●
	Megnetic type	○	○	○	○	○	○
	Screw type	○	○	○	○	○	○
Cart	190 L	●	●	●	●	●	●
	250 L	○	○	○	○	○	○
Signal & Operation	Tri-color lamp	●	●	●	●	●	●
	Tri-color lamp with buzzer	○	○	○	○	○	○
	Foot switch	●	●	●	●	●	●
Tool measurement	Manual plug type	○	○	○	○	○	○
	Swing arm type	○	○	○	○	○	○
	Automatic	○	○	○	○	○	○
Options	Air conditioner	○	○	○	○	○	○
	Bar feefer interface	○	○	○	○	○	○
	Workpiece & tool counter	○	○	○	○	○	○
	Oil-mist collector	○	○	○	○	○	○
	Automatic door	○	○	○	○	○	○
	Oil-water seperator	○	○	○	○	○	○
	Automatic part catcher	○	○	○	○	○	○
	Workpiece conveyor belt (right out)	○	○	○	○	○	○

● Standard ○ Optional × Not applicable

Parameter

Item		Unit	NL161H	NL161E	NL161V	NL161L	NL161LV	NL161T
Machining Capacity	Max. swing diameter over bed	mm	Φ500					
	Max. swing diameter over saddle	mm	Φ300					
	Max. machining diameter	mm	Φ210	Φ320				Φ240
	Max. machining length	mm	320					
	Chuck size	inch	6"(Hollow)					
	Max. bar capacity	mm	Φ45					
Travel	X axis travel	mm	125	180				
	Y axis travel	mm	350					
	X axis rapid speed	m/min	30					
	Z axis rapid speed	m/min	30					
Spindle	Spindle speed	r/min	6000					
	Main motor power (max./con.)	kW	7.5/5.5	7.5/5.5	14.4/11.6	7.5/5.5	14.4/11.6	7.5/5.5
	Spindle nose	ISO	A2-5					
	Spindle front bearing diameter	mm	Φ90					
	Spindle bore	mm	Φ56					
Servo Turret	Tool position	ea	8					-
	Square tool shank size	mm	20×20					-
	Round tool shank size	mm	Φ32					-
	Tool index time	sec	0.5					-
Power Turret	Tool position	-	-					12
	Power tool speed	r/min	-					5000
	Tool holder type	-	-					VDI20
	Square tool shank size	mm	-					16×16
	Round tool shank size	mm	-					Φ16
Tailstock	Tailstock type	-	[Hydraulic]			Servo		-
	Quill diameter/travel	mm	Φ65/80			Tailstock travel 250		-
	Quill taper	Mose	4#					-
Others	Cooling pump motor power	kW	0.37					
	Power capacity	kVA	15					
	Height	mm	1550					
	Length	mm	1850					
	Width	mm	2250 (Includes rear chip conveyor)					
	Weigth	kg	2600					
	CNC system	-	NEWAY FANUC [SIEMENS]					

* The content of the catalogue is subject to change without notice.