

**DOOSAN**



# Lynx 2100LY series

Y axis added 6 inch / 8 inch  
Compact Turning Center

**Lynx 2100LY series**

Lynx 2100LYA/LYB

Lynx 2100LSYA/LSYB



**MACHINE  
GREATNESS™**

**Basic information**

Basic Structure  
Cutting  
Performance

**Detailed Information**

Options  
Applications  
Diagrams  
Specifications

**Customer Support Service**



# Lynx 2100LY series

Lynx 2100LY series is a new model with additional Y axis on the Lynx 2100 series and enables to complete complex machining using only one setup. Easy and high precision off-center machining is possible and the productivity has been highly improved through outstanding reduction of both cutting time and non-cutting time for complex shapes machining.



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Various customer parts with Y axis complex machining



### Easy machining of complex shapes with One setup

Additional Y axis (105 mm) and sub spindle help to make machining of parts with diverse and complex shapes faster and easier.

### High Reliability

The Series' excellent reliability is based on the adoption of a wider support structure, more stable bed, low vibration/noise spindle, servo-driven turret, and a full slideway cover for preventing coolant leaks and chips from penetrating the machine.

### Improved User Convenience

The new Easy Operation Package (EOP) and hot keys enable the user to operate peripheral devices quickly and conveniently. User convenience has been further enhanced with grease type lubrication and CNC tailstock.

Product Preview

**Basic Structure**

**Basic information**

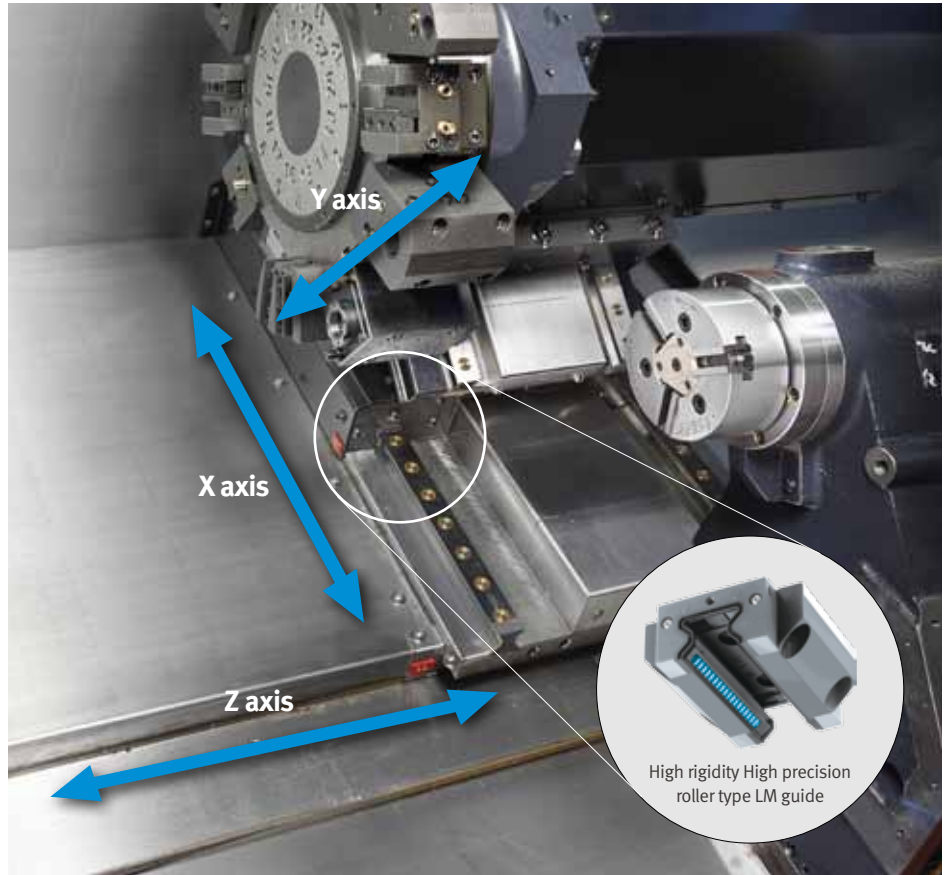
- Basic Structure
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**Customer Support Service**

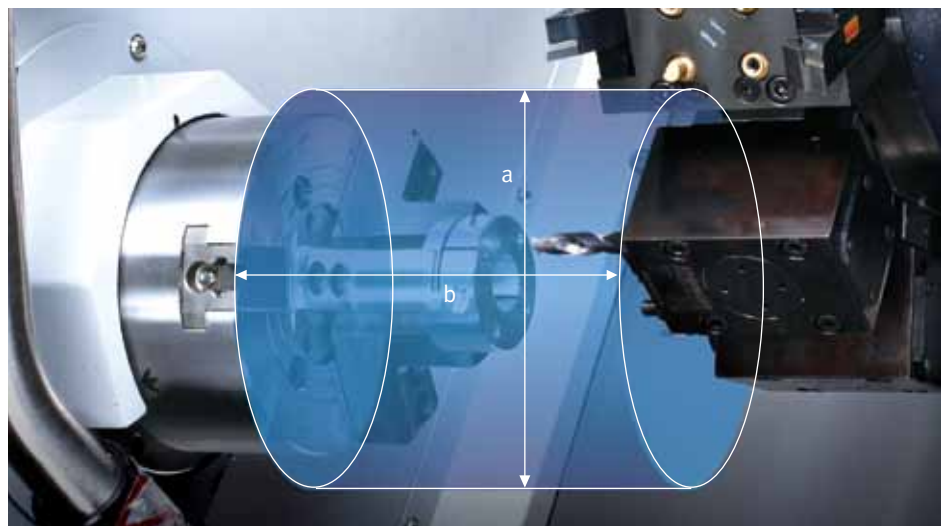
Stable high rigidity bed structure and application of roller type LM guide for all axes realize continued high rigidity and high accuracy of the machine.



Model	Chuck size	Travel distance			Rapid traverse		
		X axis	Y axis	Z axis	X axis	Y axis	Z axis
Lynx 2100LYA/LSYA	6 inch	205 mm (8.1 inch)	105 mm (4.1 inch)	560 mm (22.0 inch)	30 m/min (1181.1 ipm)	10 m/min (393.7 ipm)	36 m/min (1417.3 ipm)
Lynx 2100LYB/LSYB	8 inch						

**Structure and Machining area**

Lynx 2100LY series offers 4 models depending on the difference of chuck size and the presence or absence of sub spindle.



Model	Max. Turning diameter (a)	Max. Turning length (b)	Sub spindle
Lynx 2100LYA / LYB	300 mm* (11.8 inch)	510 mm (20.1 inch)	X
Lynx 2100LSYA / LSYB			O

\* Max. Turning diameter is 236 mm (9.3 inch) in case that optional 16 station turret is mounted

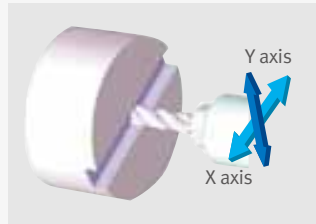


## High performance Y axis complex machining

Free operation in all directions of the rotary milling tool using Y axis control perform a variety of complex shape machining easily with high accuracy.

Y axis Travel

**105(±52.5)mm**  
**(4.1 (±2.1) inch)**



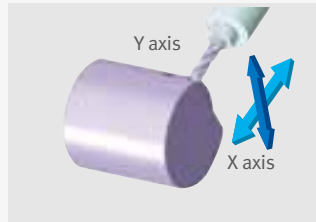
On-center face groove



Poly-side machining

Y axis Rapid Traverse

**10m/min**  
**(393.7 ipm)**



Off-center side groove



X&Y axis circular interpolation



## Multi-tasking functions

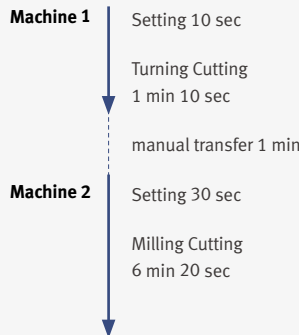
Combined functions of spindle, sub spindle, Y axis and milling realize two or more general machines' manufacturing productivities.

Reduced production lead time

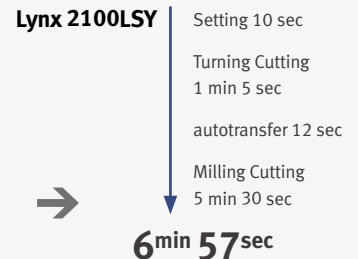
**25%**



Workpiece : Machinery Component  
Material : Aluminum (AL7075)  
Workpiece size : Ø70 x 35 mm  
Cutting tool : 16 set



**9min 10sec**



**6min 57sec**

**Productivity  
25 % Improved**

\* Cutting time curtailment : Tool change time & Rapid traverse rate Calculation

Lynx 2100 Series added with SY-axis, enabling One Set-up  
**Save time, reduce labor, high accuracy !**

2 set-up / 2 operators



1 set-up / 1 operator





## Spindle

### Basic information

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### Customer Support Service

The high power / torque motor supports high-precision and heavy-duty cutting, improving productivity.

### Main spindle

Powerful spindle motor is capable of 0.001 degree high accuracy C axis control and can provide large bar capacity until 65mm bar working diameter.

Max. spindle speed

**6000 r/min**

Spindle Motor Power

**15 kW (20 Hp)**



Model	Spindle			Sub spindle
	Max. Speed r/min	Max. Power kW (Hp)	Max.Torque N-m (ft-lbs)	Max. Speed r/min
Lynx 2100LYA/LSYA	6000	15 (20.1)	127 (93.7)	6000
Lynx 2100LYB/LSYB	4500	15 (20.1)	169 (124.7)	6000



## Sub-spindle

The sub-spindle function enables rear-side cutting by a single setup, thereby maximizing the user's productivity and efficiency. Full C axis 0.001 degree control is included to optimize capability.



Max. Speed

**6000 r/min**

Max. Power

**5.5 / 3.7 kW (7.4/5.0 Hp)**

Models	Standard chuck size	Spindle speed r/min	Max.power (15min/cont.) kW (Hp)	Max torque N-m (ft-lbs)
Lynx 2100LSYA/LSYB	5 inch	6000	5.5 / 3.7 (7.4 / 5.0)	47 (34.7)

## Turret

Servo driven indexing raise the reliability and BMT type milling turret ensures high rigidity.

### Servo driven Turret

High torque servo motor controls rotational acceleration and deceleration of turret and clamping/unclamping operations and its excellent dividing position brings continual high machining accuracy.

Number of Tool stations

**12 ea (16ea option)**

Indexing time (1 station swivel)

**0.11s**

Max. Rotary Tool Speed

**6000 r/min**  
(10000 r/min option)








12station Turret



16station Turret



### Cutting Performance

OD turning (turning dia. 88 mm (3.5 inch))				
Cutting speed	Feedrate	Cutting depth	Chip removal rate	
210 m/min (8268 ipm)	0.5 mm/rev (0.02 ipr)	4 mm (0.16 inch)	399 cm <sup>3</sup> /min (24.3 inch <sup>3</sup> /min)	
U-drilling (2 axis)				
U drill dia.	Spindle speed	Cutting speed	Feedrate	
Ø 63 mm (2.5 inch)	1011 r/min	200 m/min (7874 ipm)	0.15 mm/rev (0.006 ipr)	
Drilling				
Tool dia.	Milling spindle speed	Cutting speed	Feedrate	
Ø 12 mm (0.5 inch)	3184 r/min	120 m/min (4724 ipm)	0.20 mm/rev (0.008 ipr)	
Endmill				
Tool dia.	Cutting speed	Feedrate	Cutting depth	
Ø 12 mm (0.5 inch)	60 m/min (2362 ipm)	300 mm/rev (11.8 ipr)	14 mm (0.6 inch)	
Tapping				
Tool	Milling spindle speed	Cutting speed	Feedrate	
M14 X P1.75	387 r/min	17 m/min (669 ipm)	1.75 mm/rev (0.07 ipr)	

\* The results, indicated in this catalogue are provides as example. They may not be obtained due to differences in cutting conditions and environmental conditions during measurement.

Product Preview



**Tailstock**

**CNC Tailstock (Hydraulic Type)\_Lynx 2100LYA / LYB standard**

Basic information

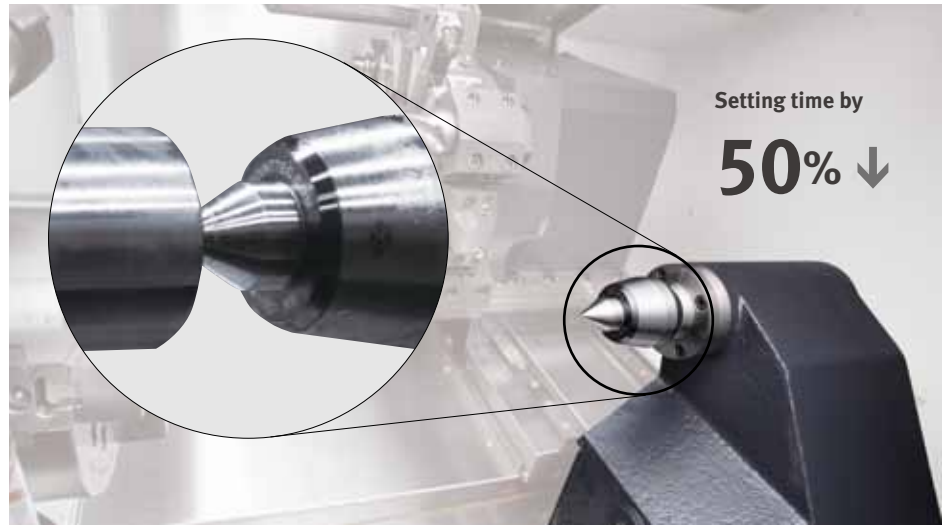
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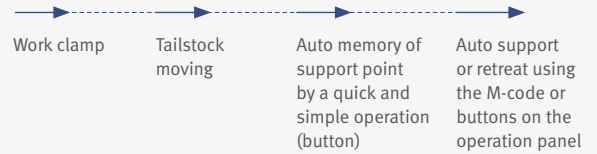
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Adoption of the hydraulic actuation type CNC tailstock (hydraulic type) enables tailstock positioning and work setting using the operation panel. The dedicated screen reduces the work setting time by about 50%.



The EOP (Easy Operation Package) System enables fast and easy tailstock position setting and control.



**Doosan Gantry Loader**

Doosan Gantry Loader is compact and easy customized stand alone type automation solution controlled by motion controller.



Discription		Unit	DOOSAN Gantry Loader for Lynx 2100LY/LSY
Travel*	Z / Y axis	mm (inch)	4422 / 1046 (174.1 / 41.2)
Rapid traverse	Z / Y axis	m/min (ipm)	210 / 180 (8267.7 / 7086.6)
Work Capacity		mm (inch)	Ø150 x 90 (5.9 x 3.5)
		kg (lb)	3 (6.6)
Number of Pallets (Work Stocker)		st	14

\* The travel distance is in case of A3 type. For further information, please contact to DOOSAN.





## Standard / Optional Specifications

● Standard ○ Optional ✕ Not applicable

Diverse optional devices and features are available to meet specific customer requirements.

NO.	Description	Features	Lynx 2100LYA	Lynx 2100LYB	Lynx 2100LSYA	Lynx 2100LSYB
1	chuck	6 inch	●	✕	●	✕
2		8 inch	○	●	○	●
3		10 inch	✕	○	✕	○
4		No chuck	○	○	○	○
5		5 inch (for sub spindle)	✕	✕	●	●
6	Jaw	Soft Jaw	●	●	●	●
7		Hard Jaw	○	○	○	○
8	Chucking option	DUAL PRESSURE CHUCKING	○	○	○	○
9		CHUCK CLAMP CONFIRMATION	○	○	○	○
10	Tailstock	CNC Tailstock (Hydraulic type)	●	●	✕	✕
11	Coolant pump	1.5 bar	●	●	●	●
12		Increase power (4.5/7/10/14.5/20 bar)	○	○	○	○
13	Coolant options	Chuck coolant	○	○	○	○
14		TSC for sub spindle	✕	✕	○	○
15		Coolant chiller	○	○	○	○
16		Oil skimmer	○	○	○	○
17		Coolant pressure switch	○	○	○	○
18		Coolant level switch : Sensing level - Empty / Low / Enough / Full	●	●	●	●
19		Coolant gun	○	○	○	○
21	Chip disposal options	Side type chip conveyor	○	○	○	○
22		Rear type chip conveyor	○	○	○	○
23		Chip bucket	○	○	○	○
24		Air blower	○	○	○	○
25		Mist collector interface	○	○	○	○
26		Integrated mist collector	○	○	○	○
27	Measuring & automation	Tool setter (Manual / Auto)	○	○	○	○
28		Part catcher with parts box	○	○	○	○
29		Part catcher with parts conveyor	○	○	○	○
30		Workpiece ejector	✕	✕	○	○
31		Auto door	○	○	○	○
32		Bar feeder interface	○	○	○	○
33		Robot interface	○	○	○	○
34		Axis-tool number display	○	○	○	○
35	Others	Tool load monitoring system	●	●	●	●
36		Linear scale	○	○	○	○
37		signal tower	○	○	○	○
38		Air gun	○	○	○	○
39		Automation power off	○	○	○	○
40		Quick change tooling(CAPTO)	○	○	○	○
41		Sketch-turn S/W	○	○	○	○
42	Customized Special Option	AUTOMATIC TOP DOOR	○	○	✕	✕
43		SHOWER COOLANT	○	○	○	○
44		DUAL PRESSURE COOLANT FOR MAIN TURRET	○	○	○	○
45		AUTO. WORK MEASUREMENT_OLP40_RENISHAW	○	○	○	○
46		TSC FOR MAIN/LEFT SPINDLE_PREPARATION	○	○	○	○
47		MILLING TOOL HOLDER_UNIVERSAL	○	○	○	○

\* Please contact DOOSAN to select detail specifications.

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Chip Conveyor **option**



Chip conveyor type	Material	Carbon steel			Cast iron		Aluminium		
		Long	Short	Needle	Short	Sludge	Long	Short	Needle
Hinged belt type*		○	△	X	△	X	○	△	X
Drum filter type**	Hinged type	○	△	X	△	X	○	△	X
	Scraper	X	○	△	○	△	X	○	△

○ : Suitable, △ : Possible, X : Not suitable

**Hinged belt type\***

Most typical type of chip conveyor. Appropriate for steel materials generating chips of length of 30 mm or more.

**Drum filter type\*\***

Chip conveyor with magnet equipped: Appropriate for cast iron workpieces generating fine chips.

**Augar**

Chip conveyor with smallest footprint. Demands 80% of footprint comparing to hinged belt.

Quick change CAPTO **option 40**

The Quick Change Tool system simplifies tool change operation. Recommended for users who need to change tools frequently or reduce the set-up time.



Grease Lubrication System

The standard grease lubrication system eliminates the need for an oil skimmer and reduces lubrication costs by about 80% compared to oil lubrication.

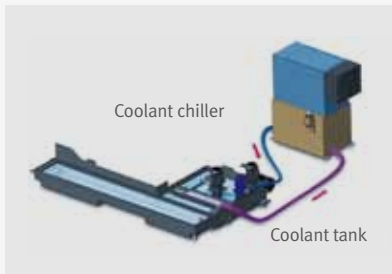
Yearly maintenance cost

Max. **80%** ↓



Coolant Chiller **option 15**

The detachable coolant chiller is recommended to maintain thermal error at a minimal level and achieve superior machining precision.



Axis-Tool number display **option 33**

Axis and tool number display in machine ensures the selected axis just before turning MPG during handle mode and to make it easier to see the number of the tool at working position.



Easy-to-clean Coolant Tank

The coolant tank can be isolated without removing the chip conveyor, significantly enhancing the operator's convenience.



Tool Setter (Manual /Auto)

(Tool length measurement device) **option 26**

The tool setter facilitates the setting of machining tools, and can be used to automatically compensate for worn tools accurately.



Part Catcher **option 27, 28**

The Part Catcher automatically catches finished parts and transfers them to the downstream processes.



Oil Skimmer **option 16**

As the Lynx 2100 Series uses a grease type lubricant, the coolant rarely mixes with oil. This optional oil skimmer helps keep exceptional service life of the coolant.




## DOOSAN Fanuc i Plus

DOOSAN Fanuc i Plus is optimized for maximizing customer productivity and convenience.

### 15 inch screen + New OP

DOOSAN Fanuc i Plus' operation panel enhances operating convenience by incorporating common-design buttons and layout, and features the Qwerty keyboard for fast and easy operation.




**DOOSAN Fanuc i Plus**

- 15 inch color display
- Intuitive and user-friendly design

**USB & PCMCIA card**

**QWERTY keyboard**

- EZ-guide i standard
- Ergonomic operator panel
- 2MB Memory
- Hot key



**iHMI Touch screen option**

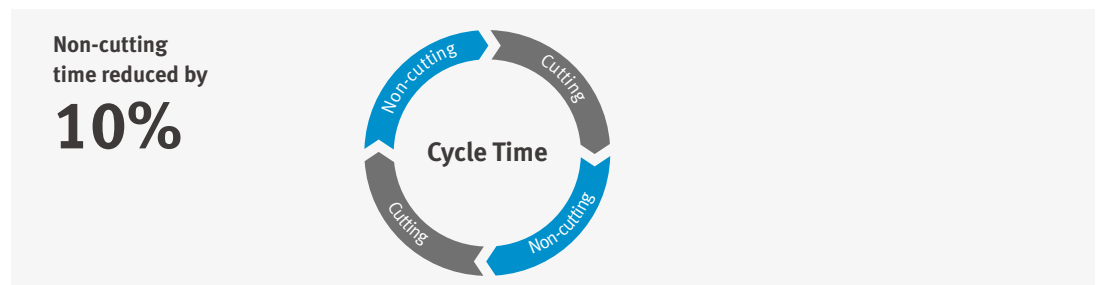
- iHMI provides an intuitive interface that utilizes a touch screen for quick and easy operation

**Variety of applications**

- Providing various applications related to PLANNING, MACHINING, IMPROVEMENT, and UTILITY for customer convenience.

### Improved Productivity

Cycle time, mechanism operating speed, acceleration and deceleration are optimized and non-cutting times during cutting operation are analyzed and minimized to enhance productivity.



**SKETCH-TURN option**



**DOOSAN Conversational programming software for PC**

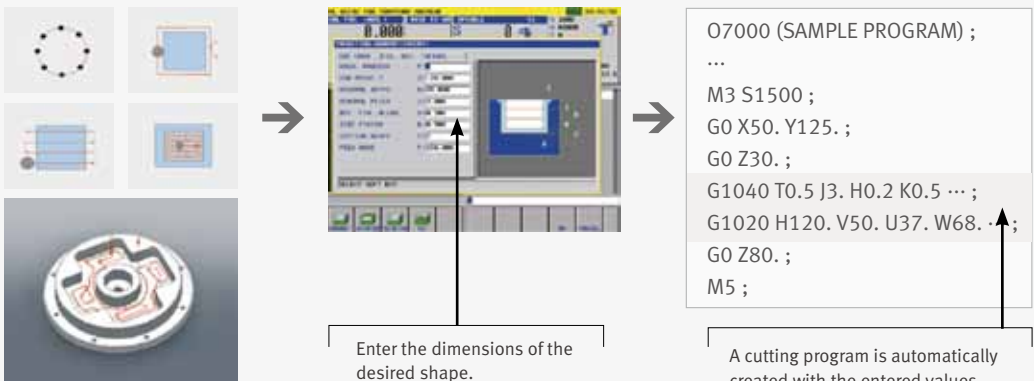
- Easy to learn for beginners
- Time savings in programming
- Reduce processing cycle time

### EZ-Guide i

Using the DOOSAN EZ-Guide i, users can create a cutting program for any desired shape, including patterns, by entering the appropriate figures only.

**Exemplary Programming**

Cutting shape → EZ-Guide i Screen → Automatic creation of cutting program



Enter the dimensions of the desired shape.

```

O7000 (SAMPLE PROGRAM) ;
...
M3 S1500 ;
G0 X50. Y125. ;
G0 Z30. ;
G1040 T0.5 J3. H0.2 K0.5 ... ;
G1020 H120. V50. U37. W68. .↑ ;
G0 Z80. ;
M5 ;
    
```

A cutting program is automatically created with the entered values.

## Easy Operation Package

Doosan Easy Operation Package (EOP) supports the user with tool, help desk, operation, functionalities to maximize operational efficiency and user convenience.

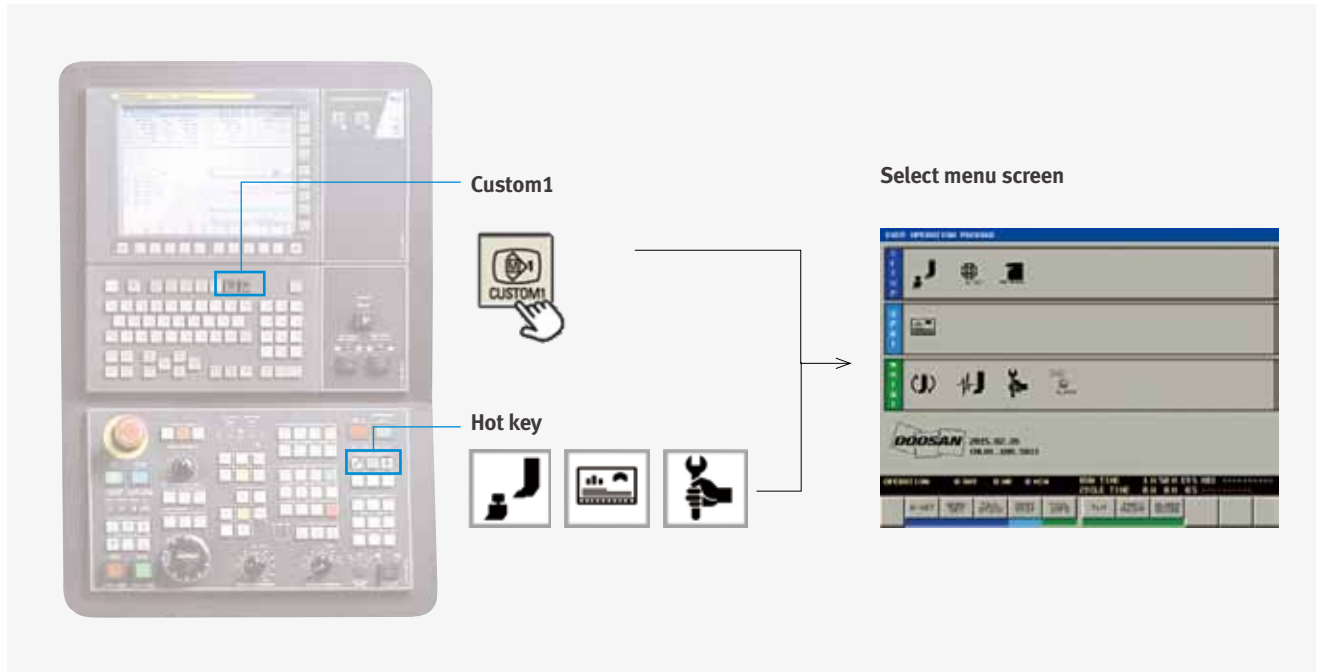
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### Convenient set up for peripheral equipment

Helps tool setter guide, work setting, tailstock setting, and other measurement and parameter control to reduce setting-up time and facilitates operation.



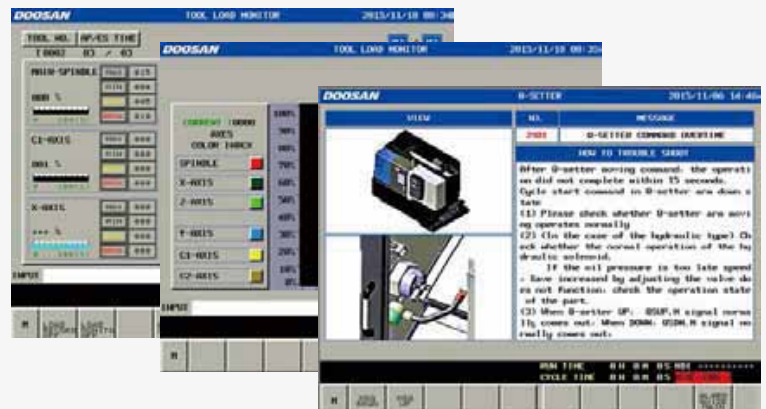
### Screen for monitoring the machine and operating conditions

The screen provides a complete view of machine operation. Information on the feed system position, offset, feedrate and spindle speed, tool life and count in an easy-to-view screen.



### Management Convenience Screen

Helps to prepare tools and provides for visual information on alarms to reduce maintenance time.



**15.6 inch screen + New OP**

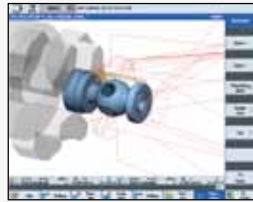
The newly-designed operation panel enhances operating convenience by incorporating common-design buttons and layout, and features the Qwerty keyboard for fast and easy operation.

SIEMENS CNC optimized for DOOSAN machine tools maximizes users' productivity.



**Conversational Convenient function**

The machining monitoring function developed on the basis of the Shop Turn – an interactive machining support function of SIEMENS – provides users with cutting, servicing and maintenance screens for easy and convenient machine operation.



**Cutting and operation support function**

This function shows a cutting and tool path simulation of a cutting program on a real-time basis.



**Tail stock function**

Dialogic Screen will help easy setting and operating about CNC Tail stock.basis.

Shop-turn mode[various]  
↓  
[attachments]



**Operation safety function**

Spindle and Turret's interference could be checked before crash. So that it Protect operator's mistake.  
[offset] [operating parameter]  
[attachment setting] [Collision avoidance]

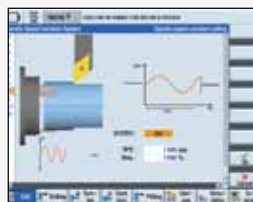
[offset]  
↓  
[operating parameter]  
↓  
[attachment setting]  
↓  
[Collision avoidance]



**Maintenance and service convenience function**

Maintenance and service of major units and peripheral devices, timer setting and parts counter setting can be easily carried out on a convenient screen.

[offset]  
↓  
[operating parameter]  
↓  
[TC service]



**Machining accuracy improvement**

The NC controls spindle speed at an optimal level for precision threading and turning, making it possible to improve surface roughness automatically.

[various]  
↓  
[attachment]  
↓  
[DSSV]



Before applying the function



After applying the function

## Power-Torque Diagram (FANUC)

### Basic information

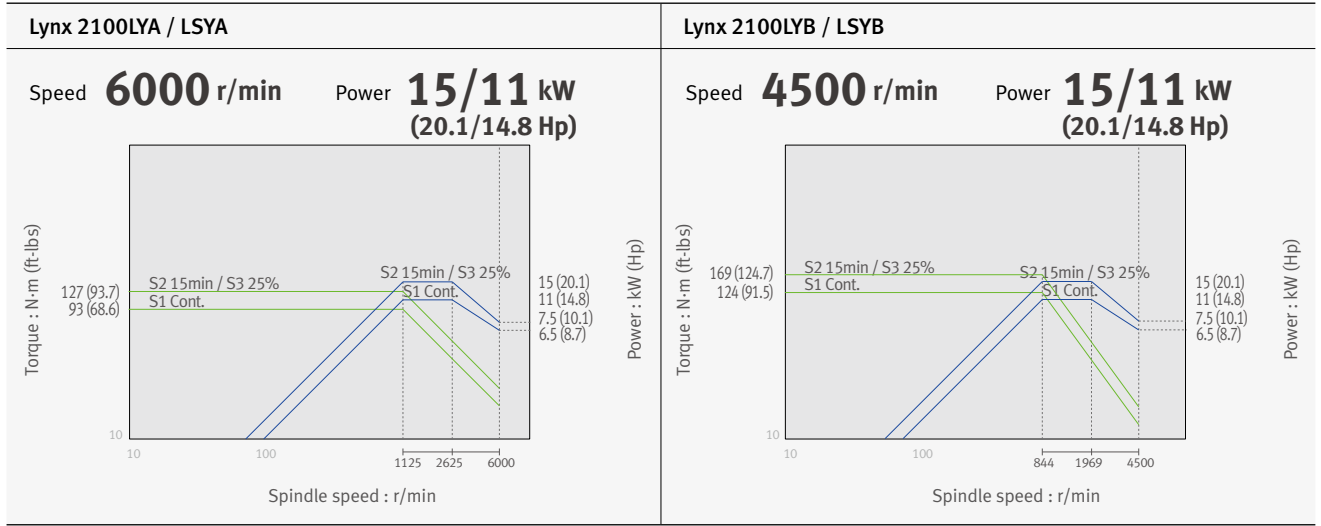
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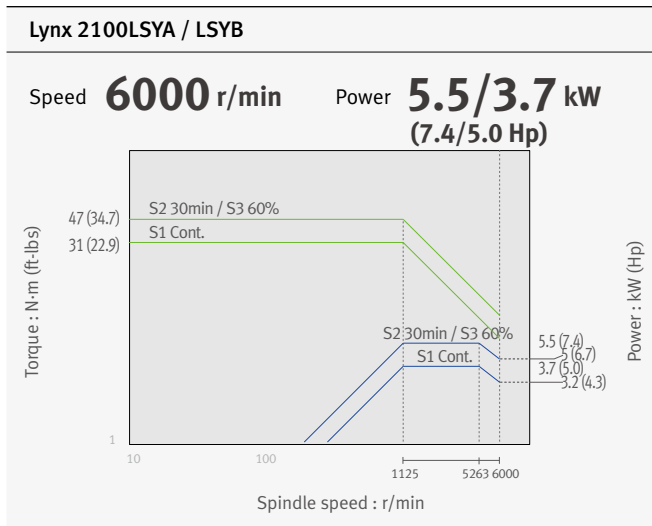
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### Customer Support Service

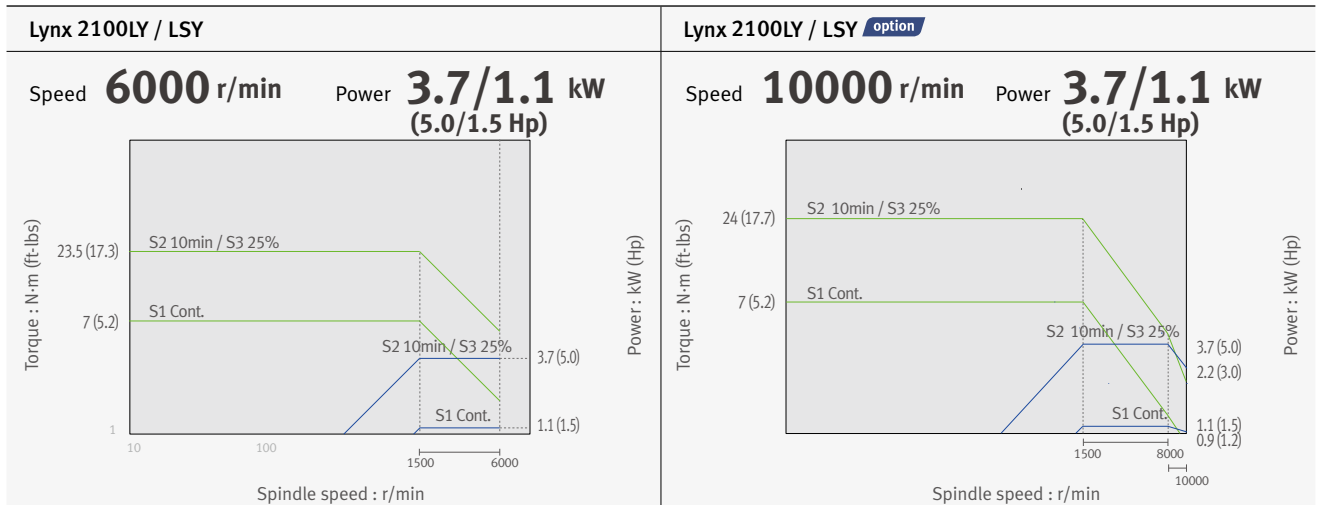
## Main Spindle



## Sub-Spindle

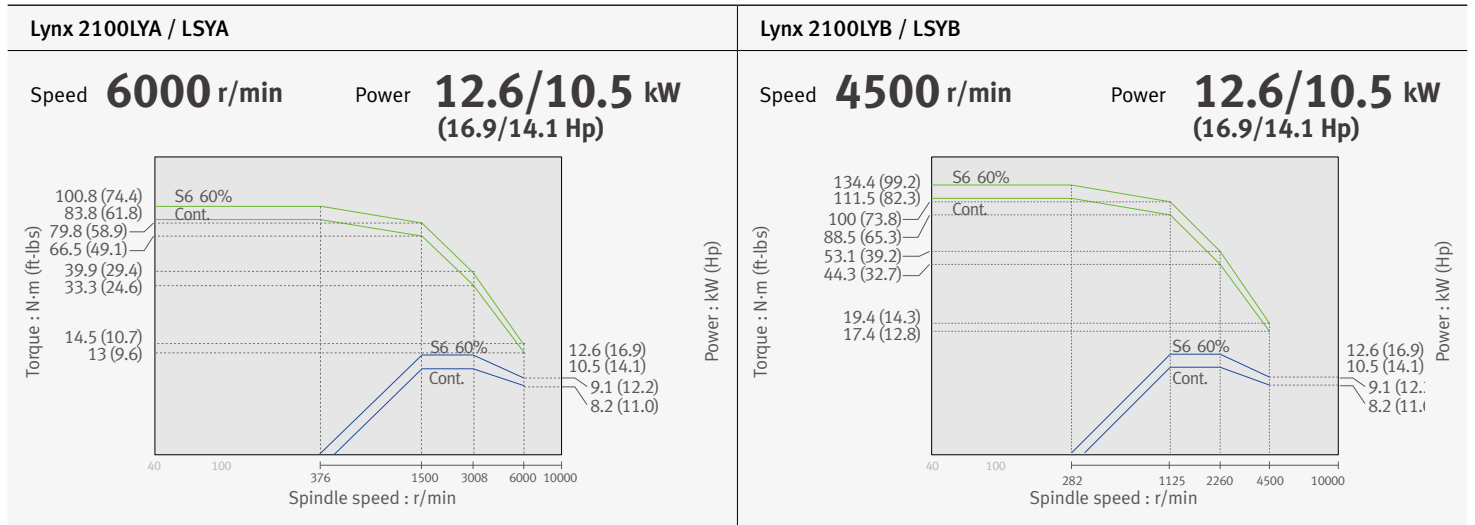


## Rotary Tool

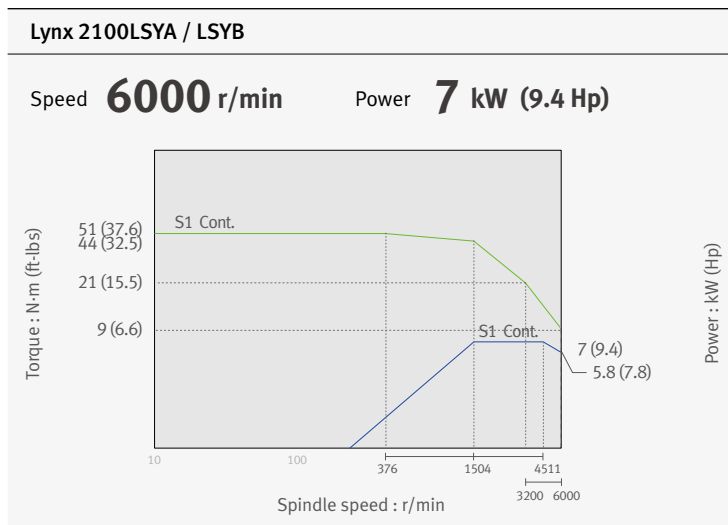


## Power-Torque Diagram (SIEMENS)

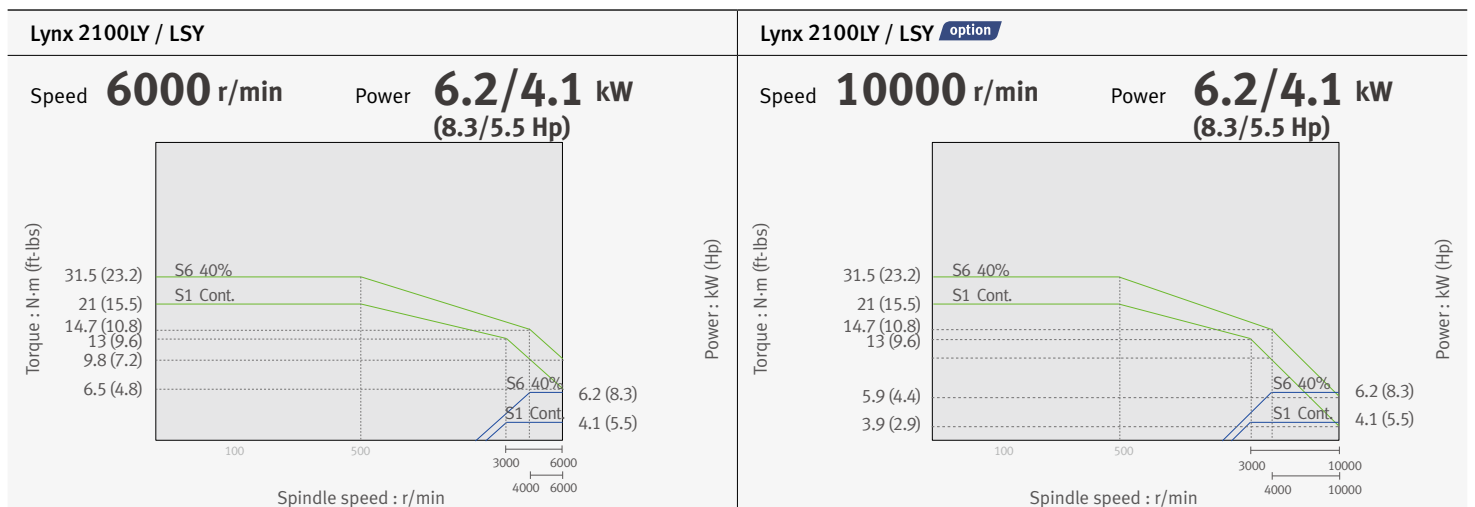
### Main Spindle



### Sub-Spindle



### Rotary Tool



## External Dimensions

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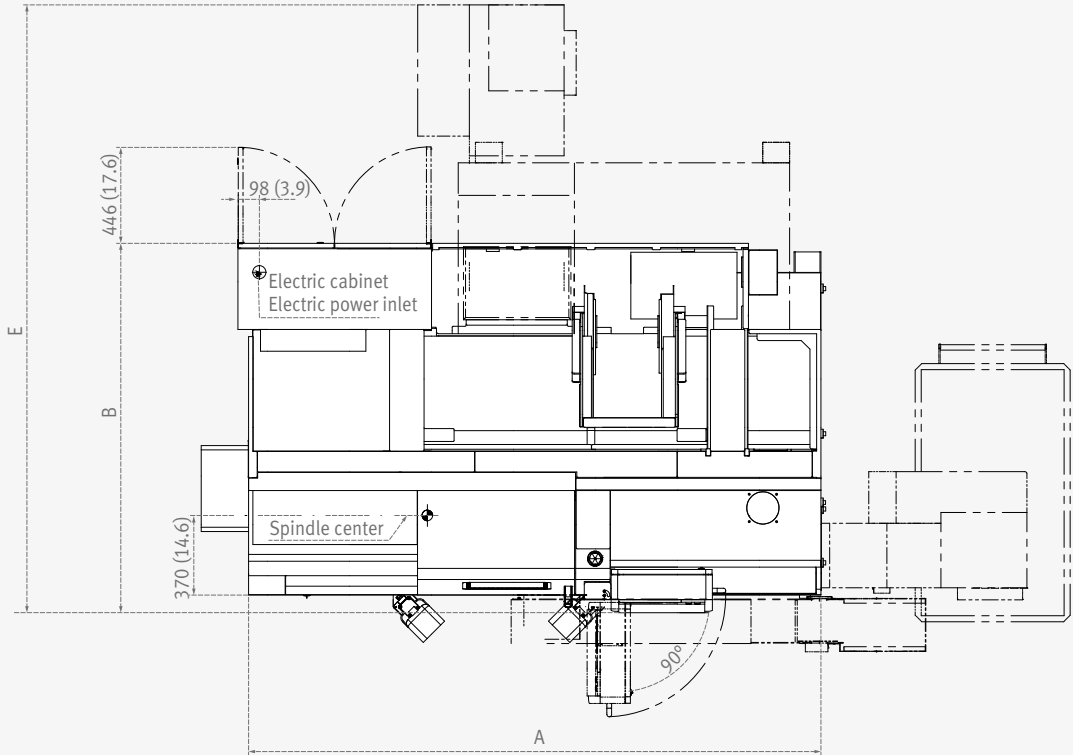
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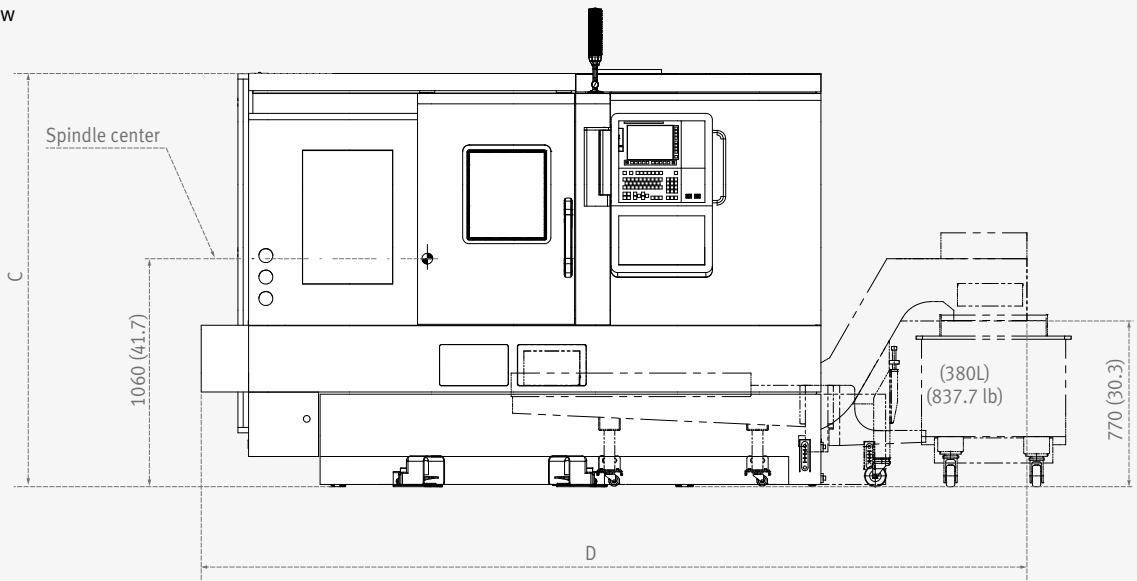
## Lynx 2100LY series

Unit : mm (inch)

Top View



Front View



Models	A	B	C	D	E
Lynx 2100LYA / LSYA	2880 (113.4)	1711 (67.4)	1921 (75.6)	3838 (151.1)	2820 (111.0)
Lynx 2100LYB / LSYB	2880 (113.4)	1711 (67.4)	1921 (75.6)	3838 (151.1)	2820 (111.0)

Lynx 2100LY series

\* Some peripheral equipment can be placed in other places

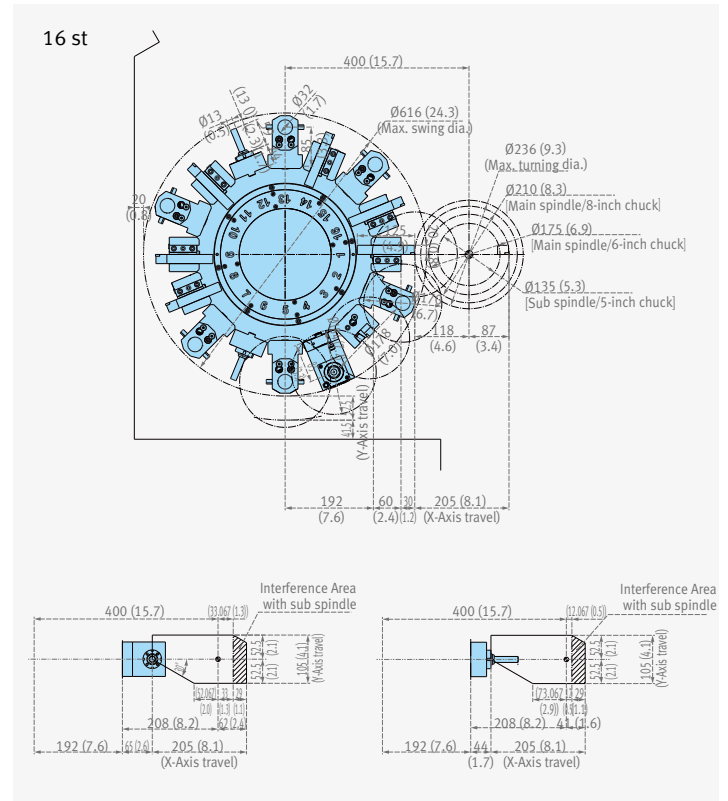
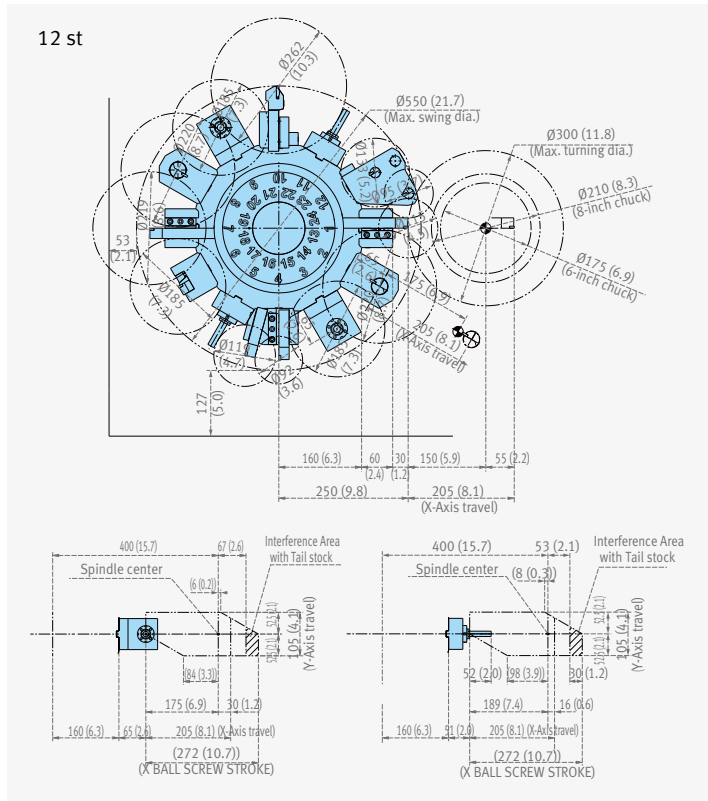


# Tool Interference Diagram

## Lynx 2100LY

Unit : mm (inch)

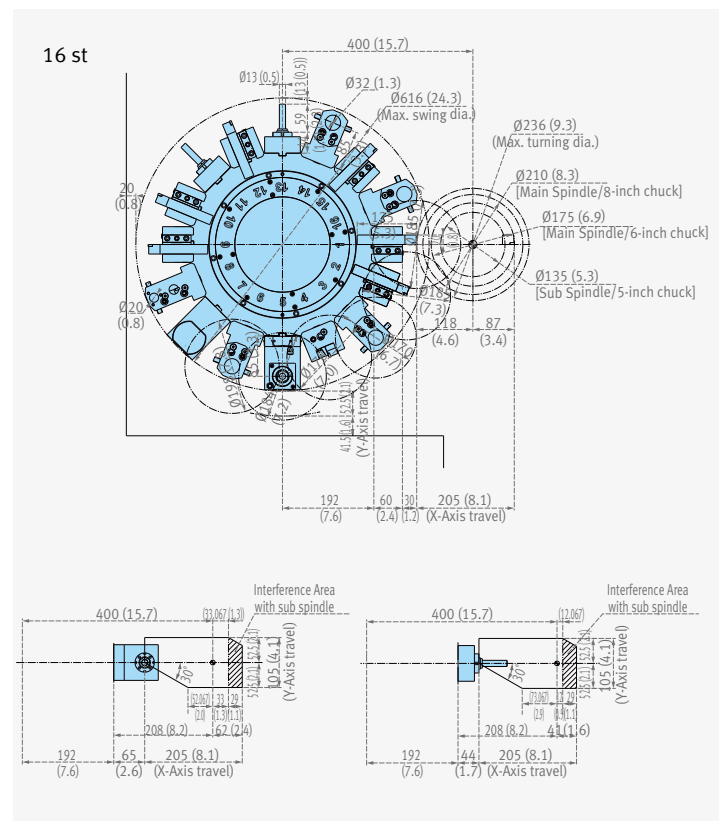
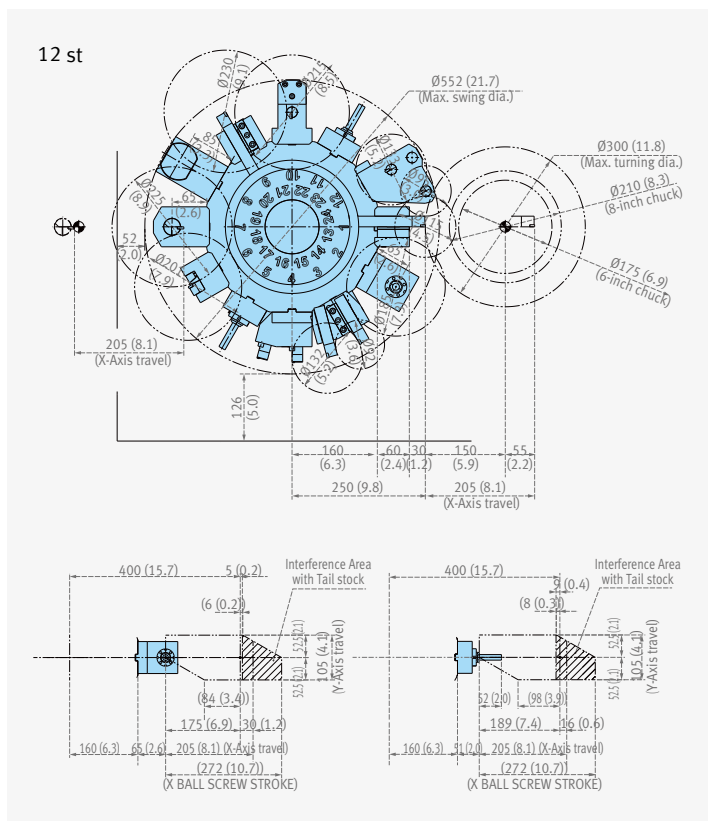
Unit : mm (inch)



## Lynx 2100LSY

Unit : mm (inch)

Unit : mm (inch)



# Tooling System

## Basic information

- Basic Structure
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- Performance

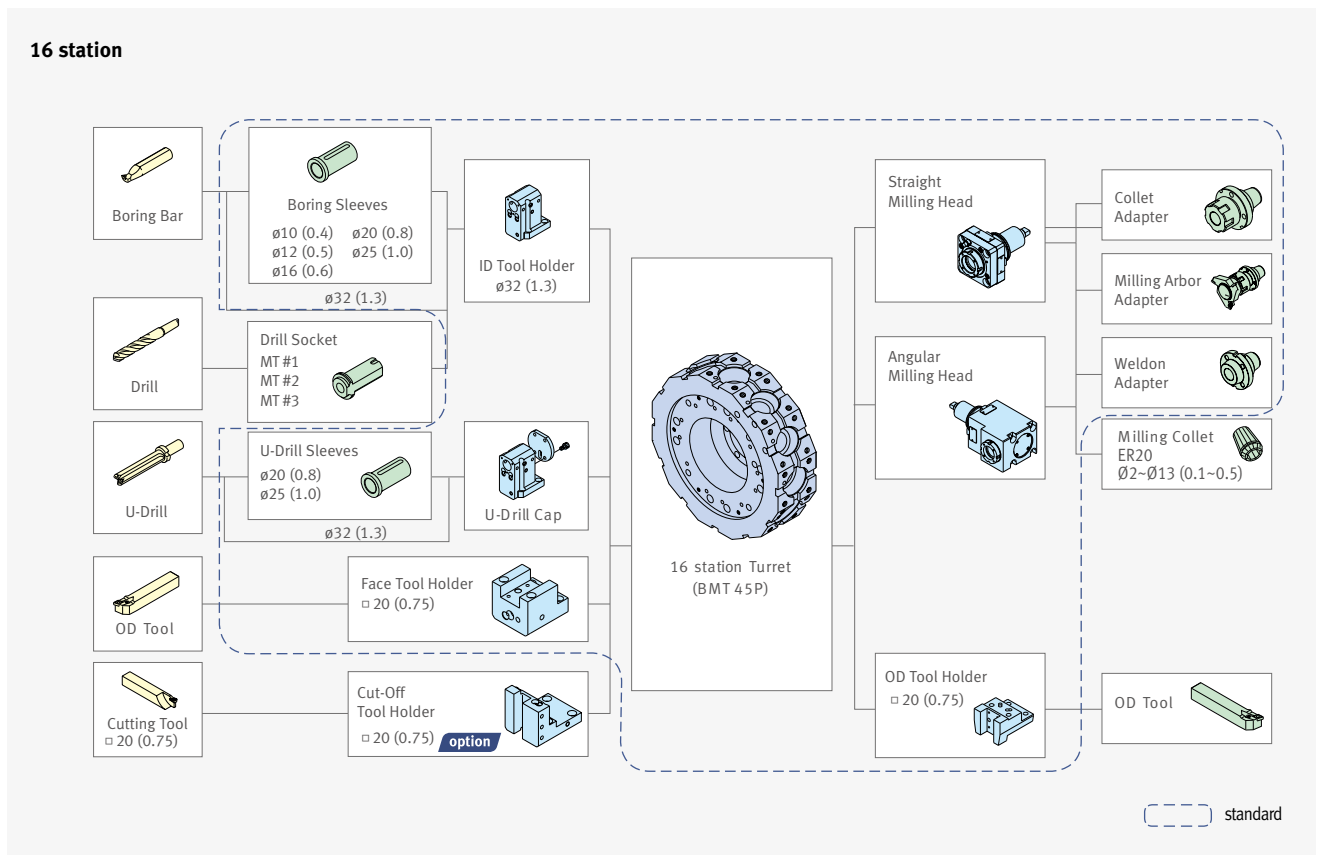
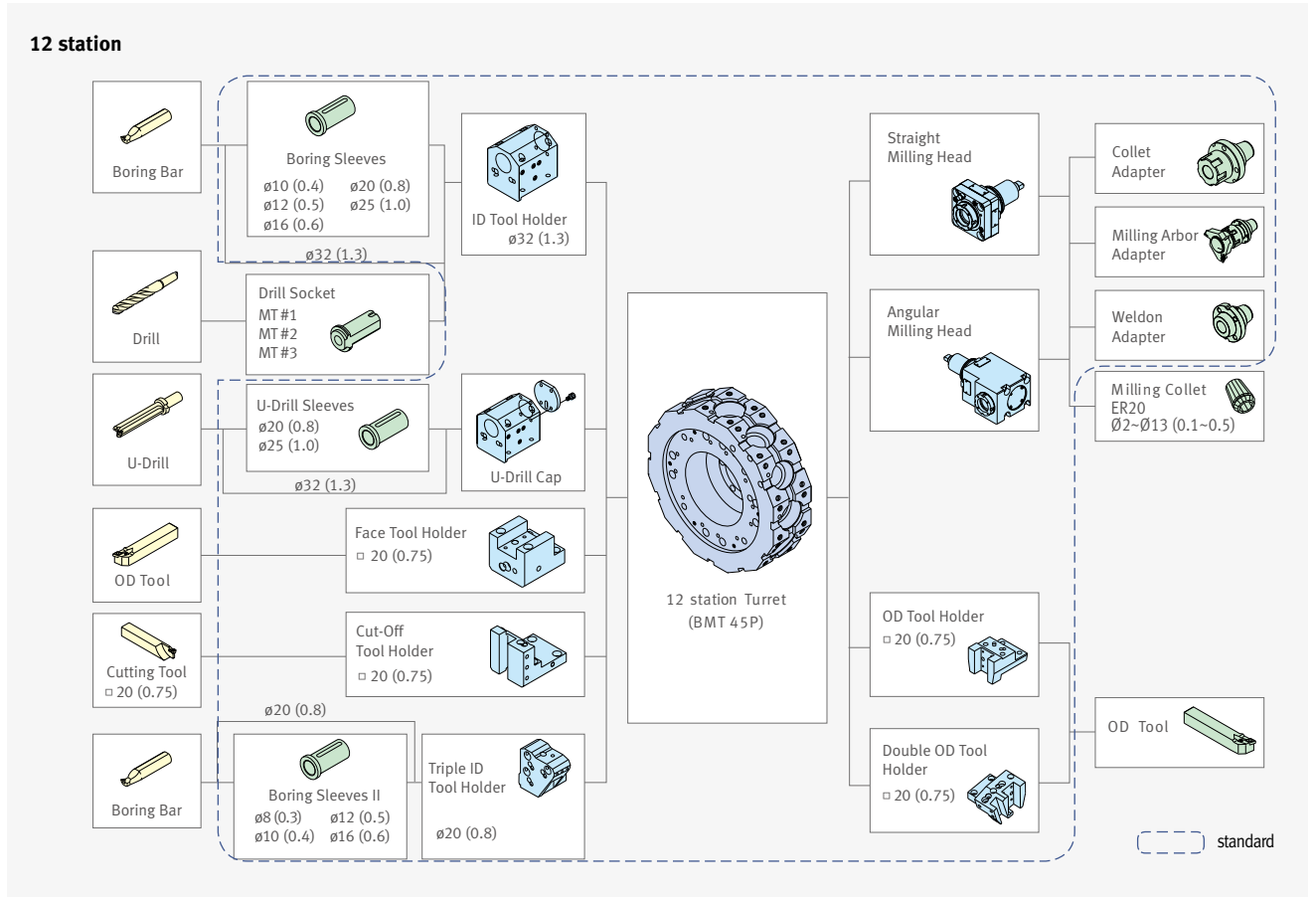
## Detailed Information

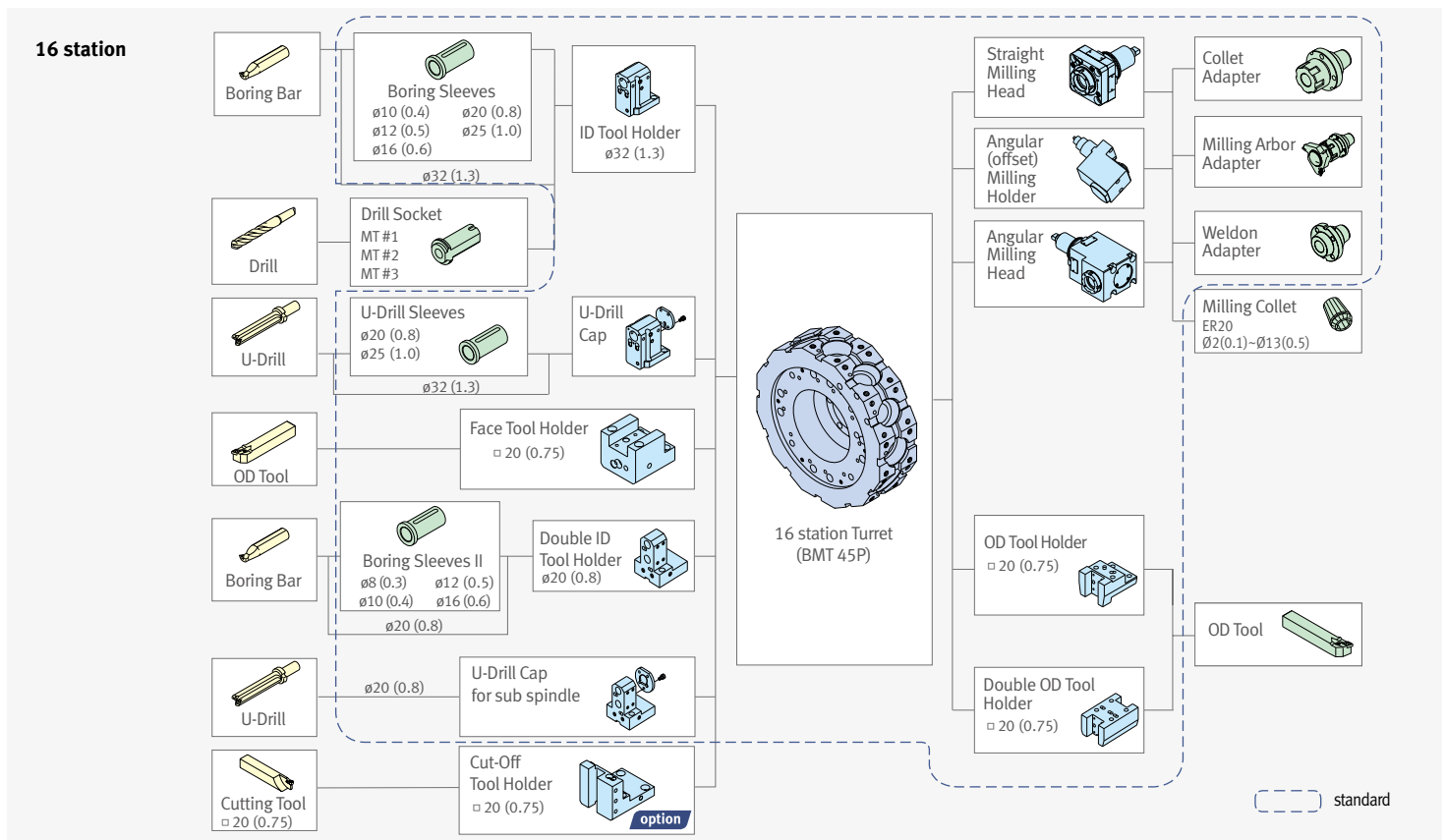
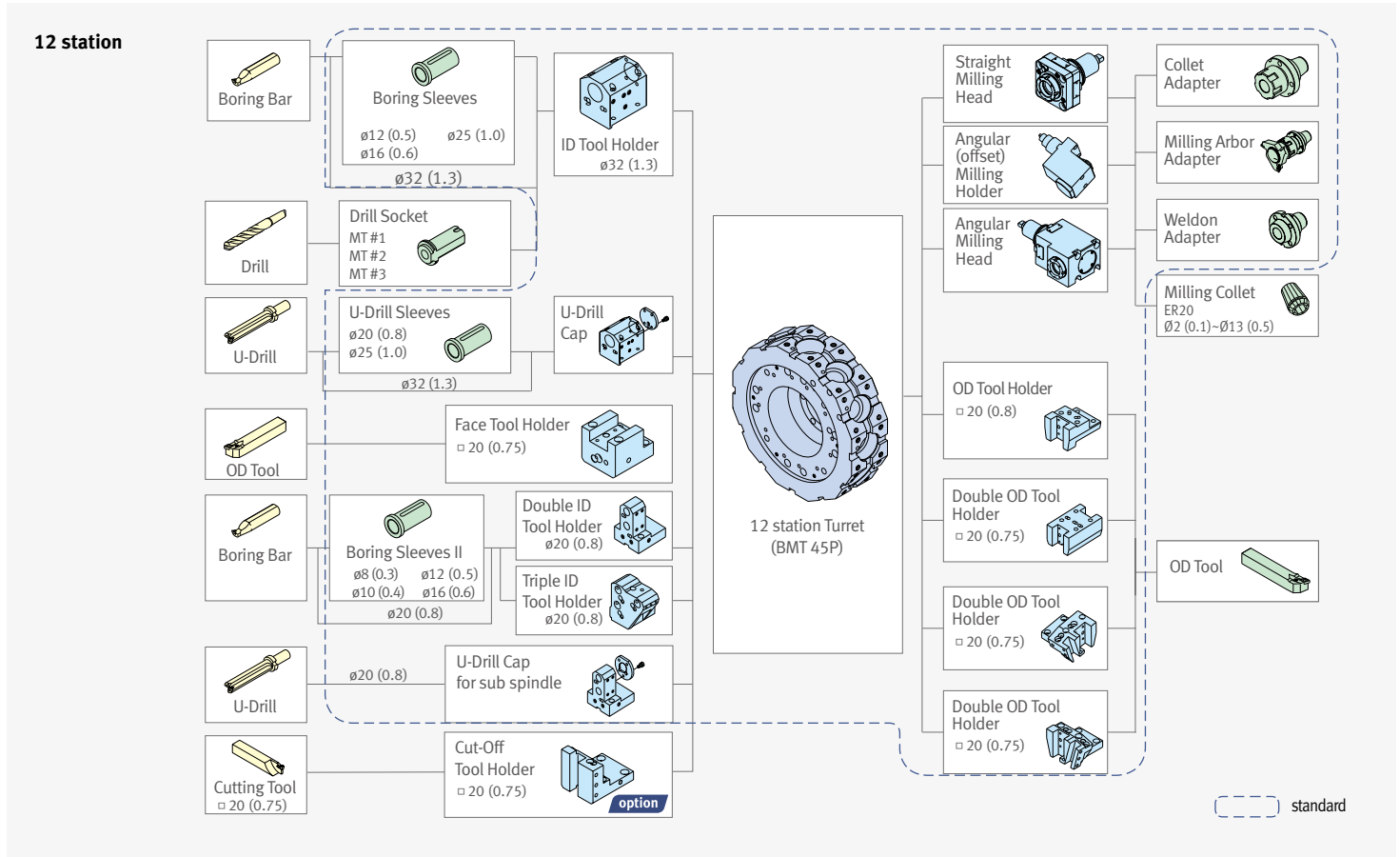
- Options
- Applications
- Diagrams
- Specifications

## Customer Support Service

### Lynx 2100LY

Unit : mm (inch)





# Working Range

## Basic information

- Basic Structure
- Cutting
- Performance

## Detailed Information

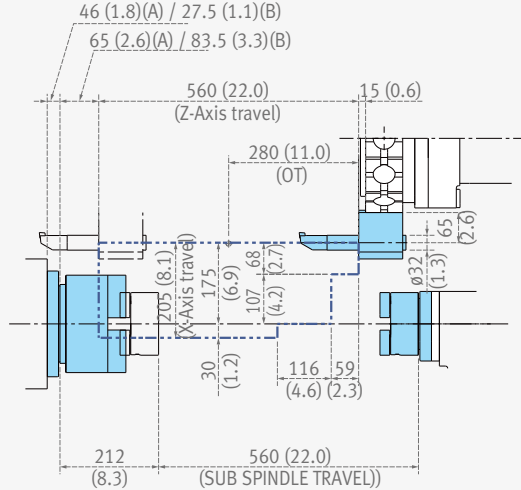
- Options
- Applications
- Diagrams
- Specifications

## Customer Support Service

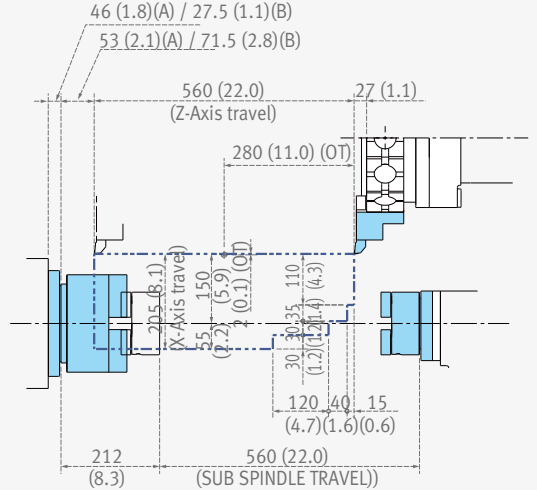
### Lynx 2100LSY

Unit : mm (inch)

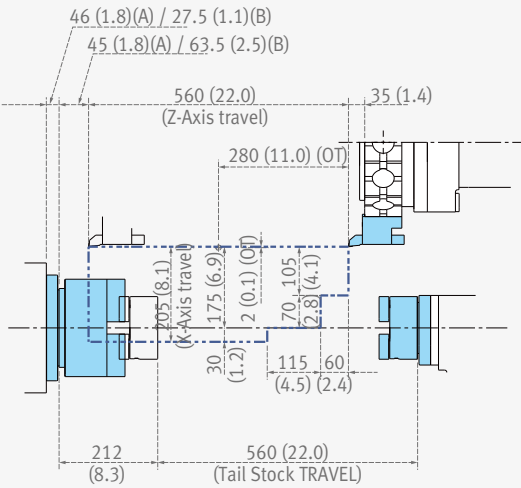
ID Holder



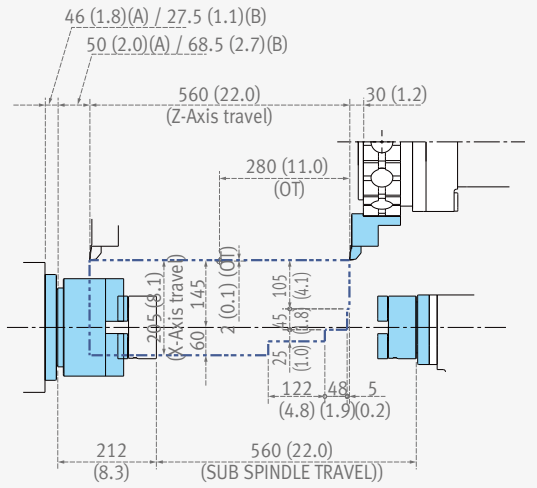
OD Holder



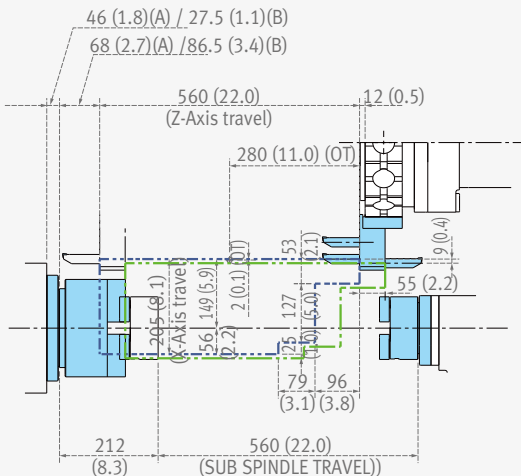
Face Tool Holder



Double OD Holder

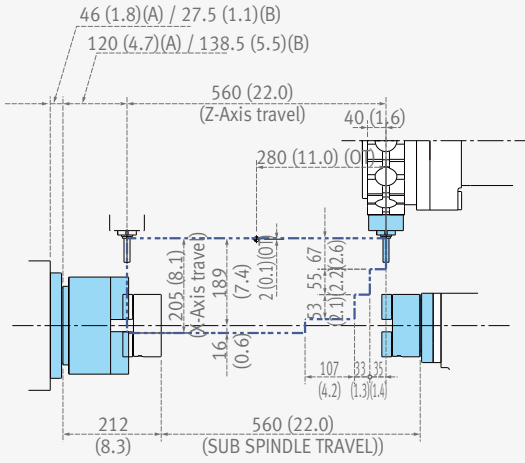


Triple ID Holder

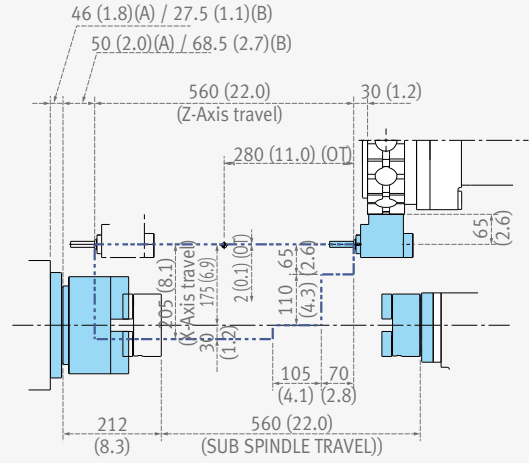


(A) : 6 inch  
(B) : 8 inch

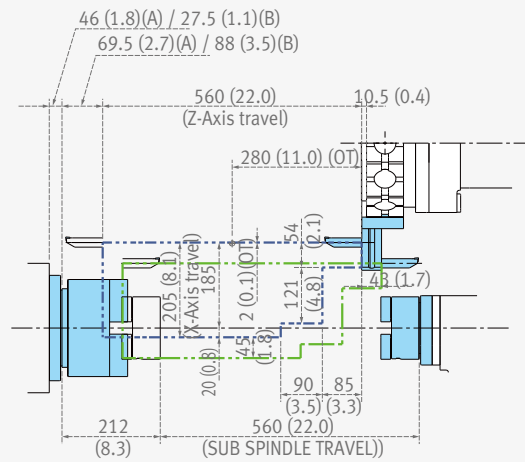
Straight Milling Holder



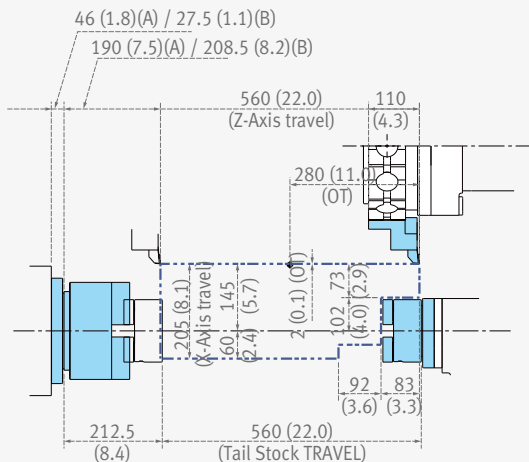
Angular Milling Holder



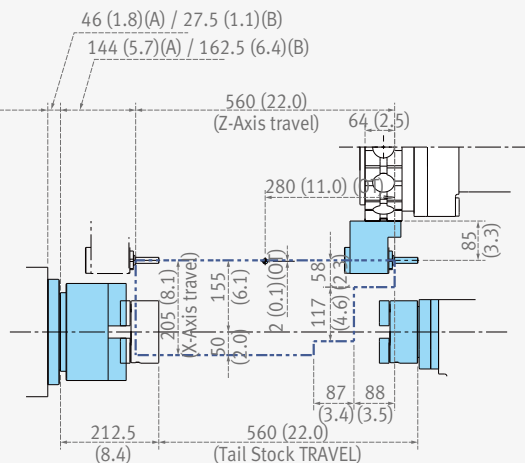
Double ID Holder



Double OD Holder (Sub)



Angular Milling Holder (Offset)



(A) : 6 inch  
(B) : 8 inch

# Working Range

## Basic information

- Basic Structure
- Cutting
- Performance

## Lynx 2100LY

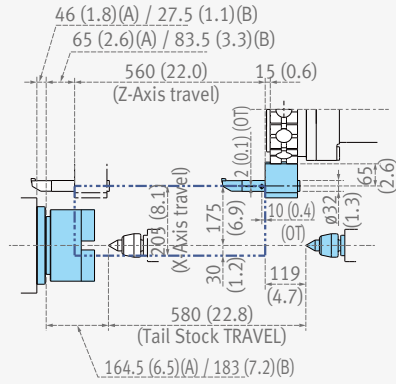
Unit : mm (inch)

### Detailed Information

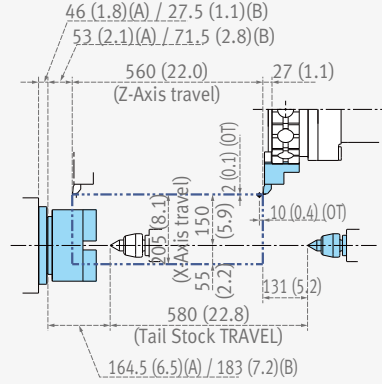
- Options
- Applications
- Diagrams
- Specifications

### Customer Support Service

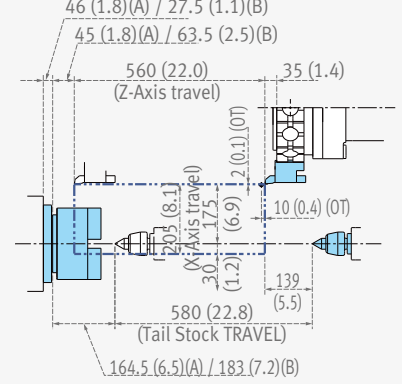
ID Holder



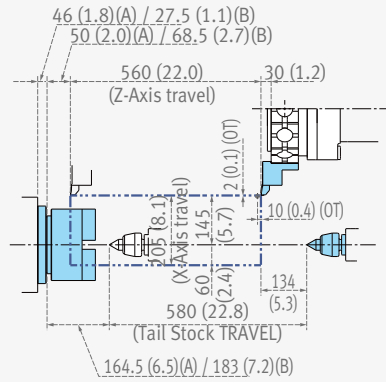
OD Holder



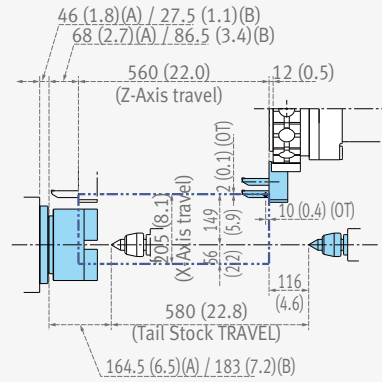
Face Tool Holder



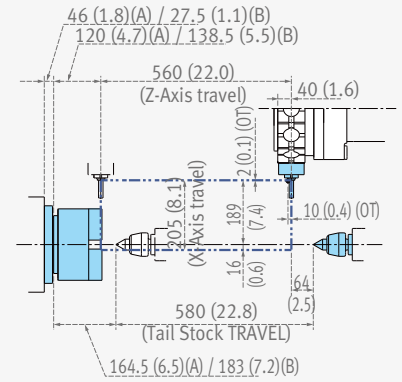
Double OD Holder



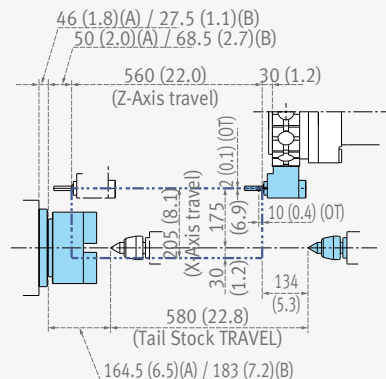
Triple ID Holder



Straight Milling Holder



Angular Milling Holder



(A) : 6 inch  
(B) : 8 inch

## Machine Specifications



Description		Unit	Lynx 2100LYA	Lynx 2100LYB	Lynx 2100LSYA	Lynx 2100LSYB
Capacity	Swing over bed	mm (inch)	600 (23.6)			
	Swing over saddle	mm (inch)	400 (15.7)			
	Recom. Turning diameter	mm (inch)	170 (6.7)	210 (8.3)	170 (6.7)	210 (8.3)
	Max. Turning diameter	mm (inch)	300 {236} (11.8 {9.3})			
	Max. Turning length	mm (inch)	510 (20.1)			
	Chuck size	inch	6 {8}*	8 {10}*	6 {8}*	8 {10}*
	Bar working diameter	mm (inch)	51 (2.0)	65 (2.6)	51 (2.0)	65 (2.6)
Travels	Travel distance	X-axis	205 (8.1)			
		Y-axis	105 (±52.5) (4.1 (±2.1))			
		Z-axis	560 (22.0)			
Feedrates	Rapid Traverse Rate	X-axis	30 (1181.1)			
		Y-axis	10 (393.7)			
		Z-axis	36 (1417.3)			
Spindle	Max. Spindle speed	r/min	6000	4500	6000	4500
	Main spindle motor power (15min/Con.)(FANUC)	kW (Hp)	15/11 (20.1/14.8)			
	Main spindle motor power (S6-60%/ Cont.) (SIEMENS)	kW (Hp)	12.6/10.5 (16.9/14.1)			
	Max. Spindle Torque for Turning (FANUC)	N-m (ft-lbs)	127 (93.7)	169 (124.7)	127 (93.7)	169 (124.7)
	Max. Spindle Torque for Turning (SIEMENS)	N-m (ft-lbs)	100.8 (74.4)	134.4 (99.2)	100.8 (74.4)	134.4 (99.2)
	Spindle nose	ASA	A2-5	A2-6	A2-5	A2-6
	Spindle bearing diameter (Front)	mm (inch)	90 (3.5)	110 (4.3)	90 (3.5)	110 (4.3)
	Spindle through hole diameter	mm (inch)	61 (2.4)	76 (3.0)	61 (2.4)	76 (3.0)
	Min. spindle Indexing angle (C-axis)	deg	0.001			
Turret	No. of tool stations	ea	12 {24positin index}* {16}*			
	OD tool size	mm (inch)	20 x 20 (0.75 x 0.75)			
	Max. boring bar size	mm (inch)	Ø32 (Ø1.3)			
	Turret Indexing time (1 station swivel)	sec	0.11			
	Max. Rotary tool speed	r/min	6000 {10000}*			
	Rotary tool motor power (FANUC)	kW (Hp)	3.7 (5.0)			
	Rotary tool motor power (SIEMENS)	kW (Hp)	7.79 (10.4)			
Tailstock	Tailstock travel	mm (inch)	580 (22.8)	-		
	Quill diameter	mm (inch)	65 (2.6)	-		
	Quill bore taper	MT	MT#4	-		
Sub spindle	Chuck size	inch	-		5	
	Max. Spindle speed	r/min	-		6000	
	Main spindle motor power (30min/Con.)(FANUC)	kW (Hp)	-		5.5/3.7 (7.4/5.0)	
	Main spindle motor power(S6-60%/ Cont.)(SIEMENS)	kW (Hp)	-		8.3/7 (11.1/9.4)	
	Max. Spindle Torque for Turning (FANUC)	N-m (ft-lbs)	-		46 (33.9)	
	Max. Spindle Torque for Turning (SIEMENS)	N-m (ft-lbs)	-		61 (45.0)	
	Spindle nose	-	-		Flat Ø110	
	Spindle bearing diameter (Front)	mm (inch)	-		75 (3.0)	
	Spindle through hole diameter	mm (inch)	-		43 (1.7)	
Min. spindle Indexing angle (C-axis)	deg	-		0.001		
Power source	Electric power supply (FANUC / SIEMENS)	kVA	28.22 / 28.73		34.09 / 28.73	
Machine Dimensions	Length	mm (inch)	2880 (113.4)			
	Width	mm (inch)	1711 (67.4)			
	Height	mm (inch)	1921 (75.6)			
	Weight	kg (lb)	3850 (8487.7)	3900 (8597.9)	4150 (9149.0)	4200 (9259.3)
CNC	NC system		DOOSAN Fanuc i Plus, SIEMENS S828D			

\* { } : Option

## NC unit specifications

● Standard ○ Optional X Not applicable

### Basic information

Basic Structure  
Cutting  
Performance

### Detailed Information

Options  
Applications  
Diagrams  
Specifications

### Customer Support Service

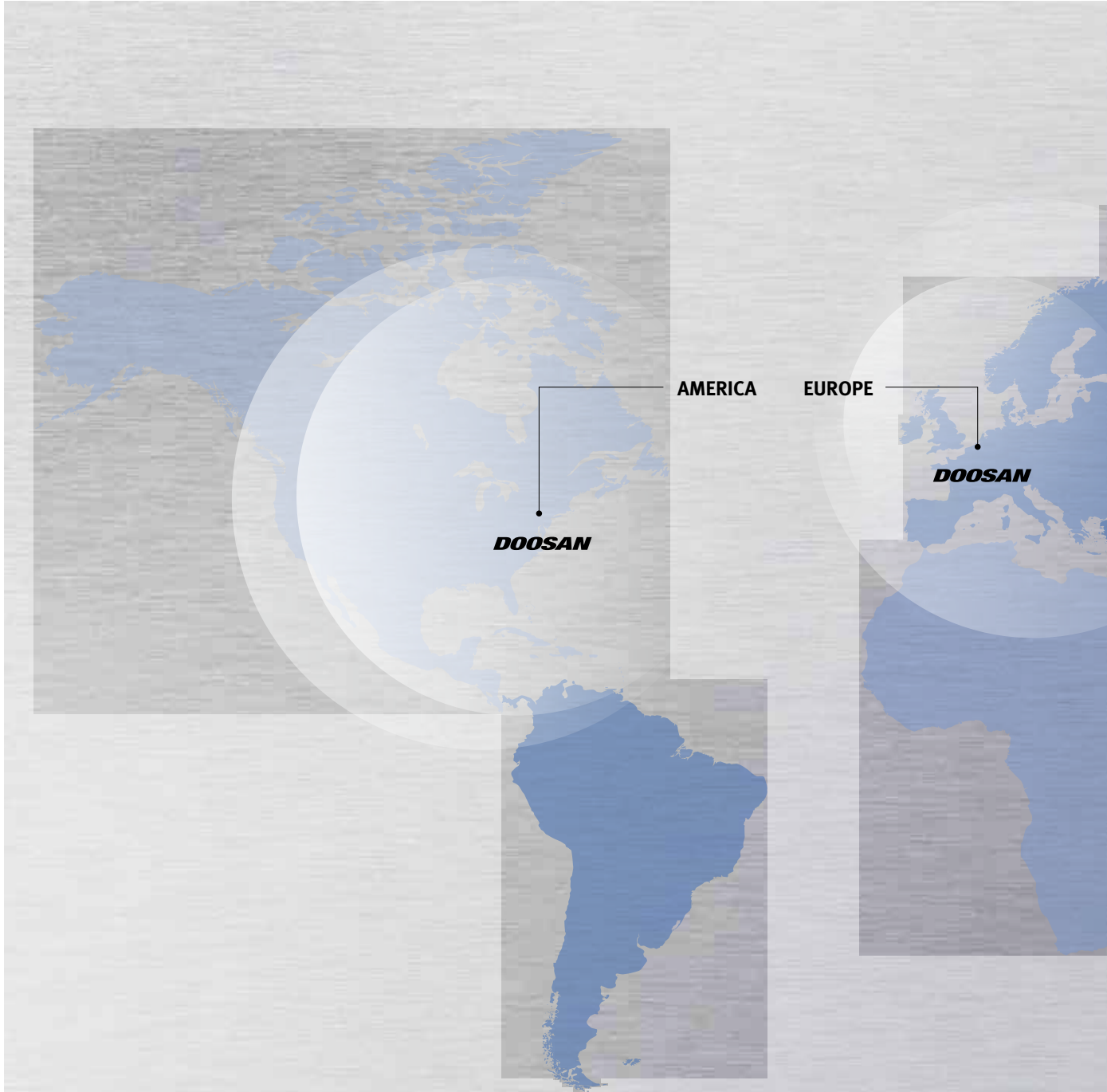


NO.	Division	Item	Spec	DOOSAN Fanuc i Plus	
				LY	LSY
1	Controlled axis	Controlled axes		4 (X, Z, C, Y)	6 (X, Z, C1, Y, C2, B)
2		Axis control by PMC		●	●
3		Synchronous/Composite control (C1 & C2 Synchro Control)		X	●
4		Torque control		●	●
5		Inch/metric conversion		●	●
6		Stored limit check before move		●	●
7		Unexpected disturbance torque detection function		●	●
8		Position switch		●	●
9	Operation	DNC operation with memory card		●	●
10		Handle interruption		○	○
11		Manual handle retrace		○	○
12	Interpolation functions	Nano interpolation		●	●
13		Linear interpolation		●	●
14		Circular interpolation		●	●
15		Helical interpolation		●	●
16		Thread cutting, synchronous cutting		●	●
17		Thread cutting retract		●	●
18		Continuous threading		●	●
19		High-speed skip	Input signal is 8points.	○	○
20	2nd reference position return	G30	●	●	
21	feed function	AI contour control I		●	●
22		AI contour control II		○	○
23		Rapid traverse block overlap		●	●
24	Program input	Optional block skip	9 pieces	●	●
25		Absolute/incremental programming	Combined use in the same block	●	●
26		Diameter/Radius programming		●	●
27		Automatic coordinate system setting		●	●
28		Workpiece coordinate system	G52 - G59	●	●
29		Chamfering/Corner R		●	●
30		Custom macro		●	●
31		Addition of custom macro common variables	#100 - #199, #500 - #999	●	●
32		Interruption type custom macro		●	●
33		Canned cycle		●	●
34		Multiple repetitive cycles	G70~G76	●	●
35	Multiple repetitive cycles II	Pocket profile	●	●	
36	Canned cycle for drilling		●	●	
37	Coordinate system shift		●	●	
38	Direct input of coordinate system shift		●	●	
39	Pattern data input		●	●	
40	Operation Guidance Function	EZ Guide i (Conversational Programming Solution)		●*1)	●*1)
41		iHMI with Machining Cycle		○*2)	○*2)
42		EZ Operation package		●	●
43	Auxiliary/Spindle speed function	Constant surface speed control		●	●
44		Rigid tap		●	●
45		Arbitrary speed threading		○	○
46	Tool function/Tool compensation	Y-axis offset		●	●
47		Tool offset pairs	128-pairs	●	●
48		Tool offset pairs	200-pairs	○	○
49		Tool radius/Tool nose radius compensation		●	●
50		Tool geometry/wear compensation		●	●
51		Automatic tool offset	G36/G37	●	●
52		Direct input of offset value measured B		●	●
53	Tool life management		●	●	
54	Accuracy compensation function	Backlash compensation for each rapid traverse and cutting feed		●	●
55		Stored pitch error compensation		○	○
56	Editing operation	Part program storage size & Number of registerable programs	1280M(512KB)_400programs	X	X
57		Part program storage size & Number of registerable programs	2560M(1MB)_800programs	X	X
58		Part program storage size & Number of registerable programs	5120M(2MB)_400programs	X	X
59		Part program storage size & Number of registerable programs	5120M(2MB)_800programs	X	X
60	Data input/output	Playback		●	●
61		Fast data server		○	○
62		External data input		●	●
63		Memory card input/output		●	●
64		USB memory input/output		●	●
65	Automatic data backup		●	●	
66	Interface function	Embedded Ethernet		●	●
67		Fast Ethernet		○	○
68	Others	Display unit	15" color LCD	●	●
69			15" color LCD with Touch Panel	○	○
70	Robot interface	Robot interface with PMC I/O module		○	○
71		Robot interface with PROFIBUS-DP		○	○



NO.	Division	Item	Spec.	Lynx 2100LY / LSY
1	Controlled axis	Controlled axes	Y-type	X, Z, C, R, Y
2		R: Milling spindle	SY-type	X, Z, C, R, C2, Y, B
3			Additional B-axis	○
4		Simultaneously controlled axes	Positioning(G00)/Linear interpolation(G01) : 3 axes Circular interpolation(G02, G03) : 2 axes	●
5		Backlash compensation		●
6		Leadscrew error compensation		●
7		Measuring system error compensation		●
8		Feedforward control	velocity-dependent	●
9		Follow up mode		●
10		Programmable acceleration		●
11		Emergency stop / overtravel		●
12		Least command increment	0.001mm (0.0001 inch)	●
13		Least input increment	0.001mm (0.0001 inch)	●
14		Maximum commandable value	±99999.999mm (±3937 inch)	●
15		Machine lock (PRT)		●
16		Absolute encoder		●
17	Interpolation & Feed function	Reference point return	G75 FP=1	●
18		2nd reference point return	G75 FP=2	●
19		3rd / 4th reference return	G75 FP=3, 4	●
20		Linear interpolation	Max. 4	●
21		Circular interpolation	G02, G03	●
22		Inverse time feedrate	G93	●
23		Helical interpolation		●
24		Universal interpolator NURBS		●
25		Spline interpolation (A, B and C splines)		○
26		Dwell	G04	●
27		Separate path feed for corners and chamfers		●
28		Acceleration with Jerklimitation		●
29	Spindle function	Retraction for rigid tapping	●	
30	Tool function	Tool radius compensations in plane		●
31		• With approach and retract strategies		●
32		• With transition circle/ellipse on outer edges		●
33		Number of tools/cutting edges in tool list		256/512
34		Tool length compensation		●
35		Operation with tool management		●
36		Monitoring of tool life and workpiece count		●
37		Manual measurement of tool offset		●
38		Number of levels for skip blocks 1		●
39		Number of levels for skip blocks 8		○
40	Polar coordinates		●	
41	Dimensions metric / inch, changeover manually or via program		●	
42	Programming & Editing function	Program functions		
43		• Dynamic preprocessing memory FIFO		●
44		• Look Ahead, IPO blocks, buffered		1
45		• Inclined-surface machining with swivel cycle		●
46		• Axis/spindle replacement		●
47		• Geometry axes, switchable online in the CNC program		●
48		Online ISO dialect interpreter		●
49		Program/workpiece management		
50		• Parts programs on NCU, max. number		300
51		• Workpieces on NCU, max. number		100
52		• On additional plug-in CF card		●
53		• On USB storage medium (e.g. disk drive, USB stick)		●
54		• On network drive		○
55		Program editor		
56		• Programming support for cycles program(Program Guide)		●
57		• CNC editor with editing functions: Marking, copying, deleting		●
58		• Programming graphics/free contour input (contour calculator)		●
59		• ShopTurn/ShopMill Machining step programming		●
60	Technology cycles for drilling/milling		●	
61	Pocket milling free contour and islands stock removal cycle		●	
62	Residual material detection		●	
63	Access protection for cycles		●	
64	Programming support can be extended, e.g. customer cycles		●	
65	3D simulation, finished part		●	
66	Simultaneous recording		●	
67	OTHERS FUNCTIONS (Operation, setting & Display, etc)	JOG		
68		• Handwheel selection		●
69		• Switchover: inch/metric		●
70		• Manual measurement of zero/work offset		●
71		• Manual measurement of tool offset		●
72		• Automatic tool/workpiece measurement		●
73		Automatic		
74		• Execution from USB or CF card interface on operator panel front		●
75		• Execution from network drive		○
76		Operating software languages		
77		• Ch _S,Ch _T, En, Fr, Gr, It, Kr, Pt, Sp		●
78		• Additional languages, use of language extensions		●
79		Limit switch monitoring		●
80		Software and hardware limit switches		●
81	Position monitoring		●	
82	Standstill (zero-speed) monitoring		●	
83	Clamping monitoring		●	
84	2D/3D protection zones		●	
85	Contour monitoring		●	
86	Remote Control System (RCS) remote diagnostics			
87	• RCS Host remote diagnostics function		○	
88	• RCS Commander (viewer function)	RCS Commander for PC/PG on CD-ROM	●	
89	Easy Extend		●	
90	Contour handwheel		●	
91	Cross-mode actions (ASUPs and synchronized actions in all operating modes)		○	

# Responding to Customers Anytime, Anywhere



## Global Sales and Service Support Network

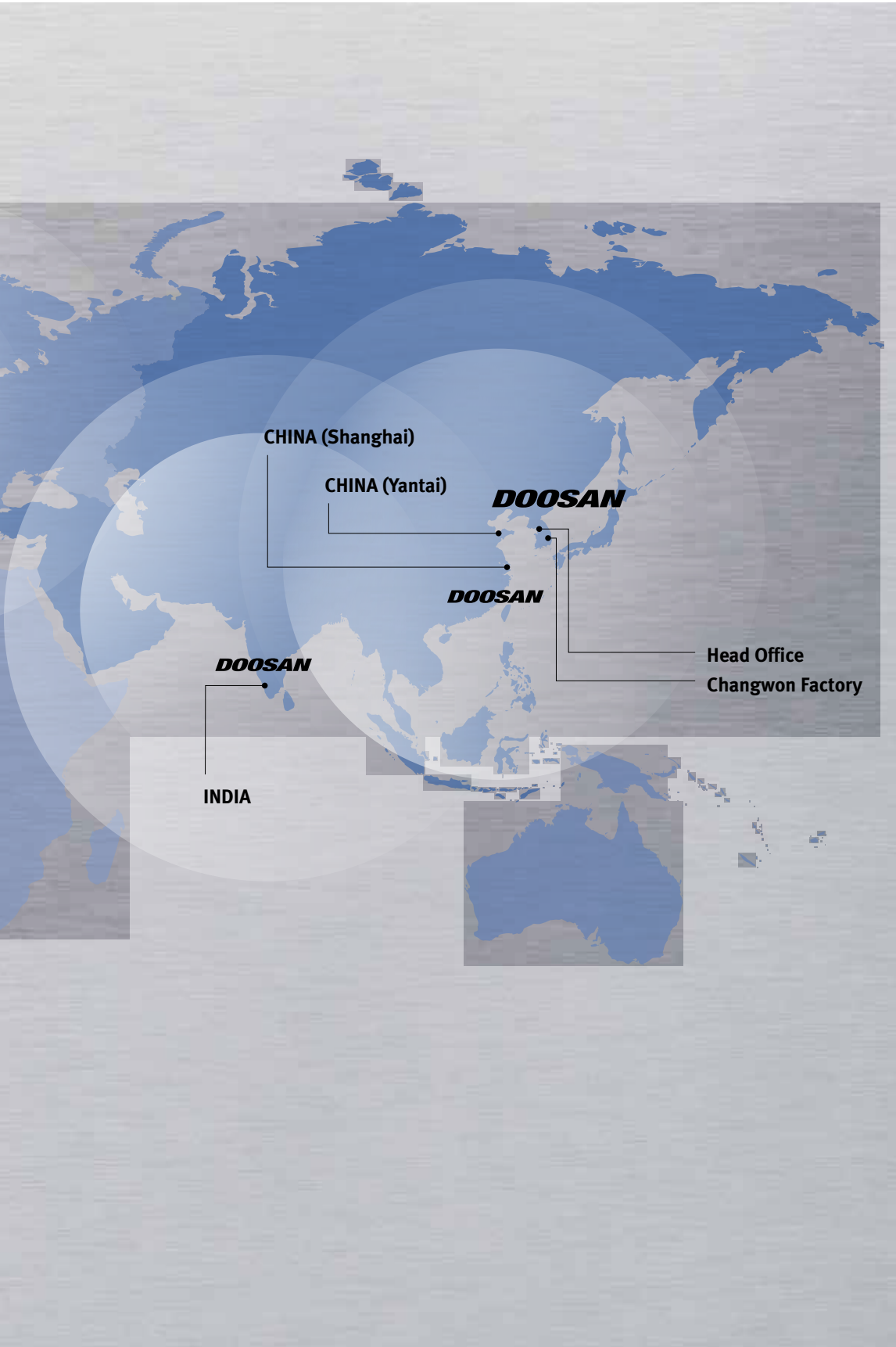
Corporations	Dealer Networks	Technical Centers	Service Post	Factories
4	164	51	198	3

Technical Center: Sales Support, Service Support, Parts Support

## Doosan Machine Tools' Global Network, Responding to Customer's Needs nearby, Anytime, Anywhere

Doosan machine tools provides a system-based professional support service before and after the machine tool sale by responding quickly and efficiently to customers' demands.

By supplying spare parts, product training, field service and technical support, we can provide top class support to our customers around the world.



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### Customer Support Service

We help customers to achieve success by providing a variety of professional services from pre-sales consultancy to post-sales support.

---

### Supplying Parts



- Supplying a wide range of original Doosan spare parts
- Parts repair service

---

### Field Services



- On site service
- Machine installation and testing
- Scheduled preventive maintenance
- Machine repair

---

### Technical Support



- Supports machining methods and technology
- Responds to technical queries
- Provides technical consultancy

---

### Training



- Programming / machine setup and operation
- Electrical and mechanical maintenance
- Applications engineering

## Major Specifications

### Lynx 2100LY series



Discription	Unit	Lynx 2100LYA	Lynx 2100LYB	Lynx 2100LSYA	Lynx 2100LSYB
Max. turning diameter	mm (inch)	300 {236} (11.8 {9.3})			
Max. turning length	mm (inch)	510 (20.1)			
Chuck size	inch	6 {8}*	8 {10}*	6 {8}*	8 {10}*
Max. spindle speed	r/min	6000	4500	6000	4500
Spindle motor power	kW (Hp)	15/11 (20.1/14.8) (15min/Cont.)			

\* {} option

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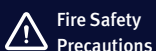
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\* For more details, please contact Doosan Machine Tools.

\* The specifications and information above-mentioned may be changed without prior notice.

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**Fire Safety  
Precautions**

There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting use coolants and modifying the machine without the consent of the manufacturer. Please check the SAFETY GUIDANCE carefully before using the machine.

ver. EN 200511 SU