



HIGH PRODUCTIVITY GANG TYPE 6-INCH
GLOBAL COMPACT TURNING CENTER

Lynx

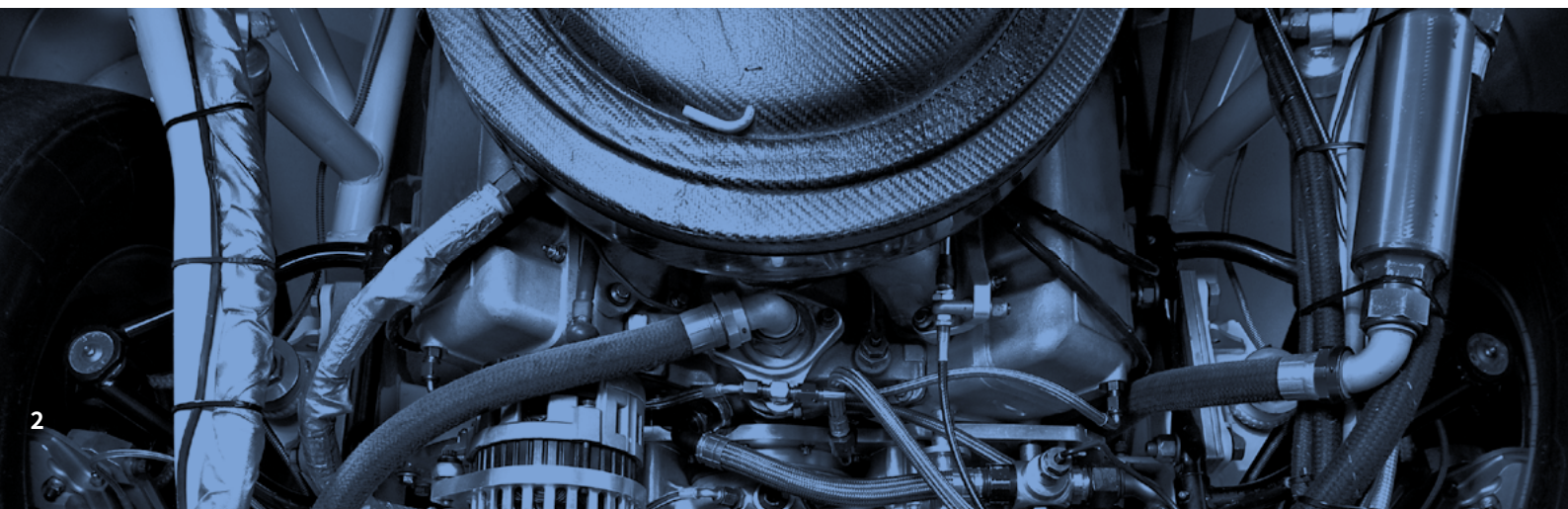
2100G

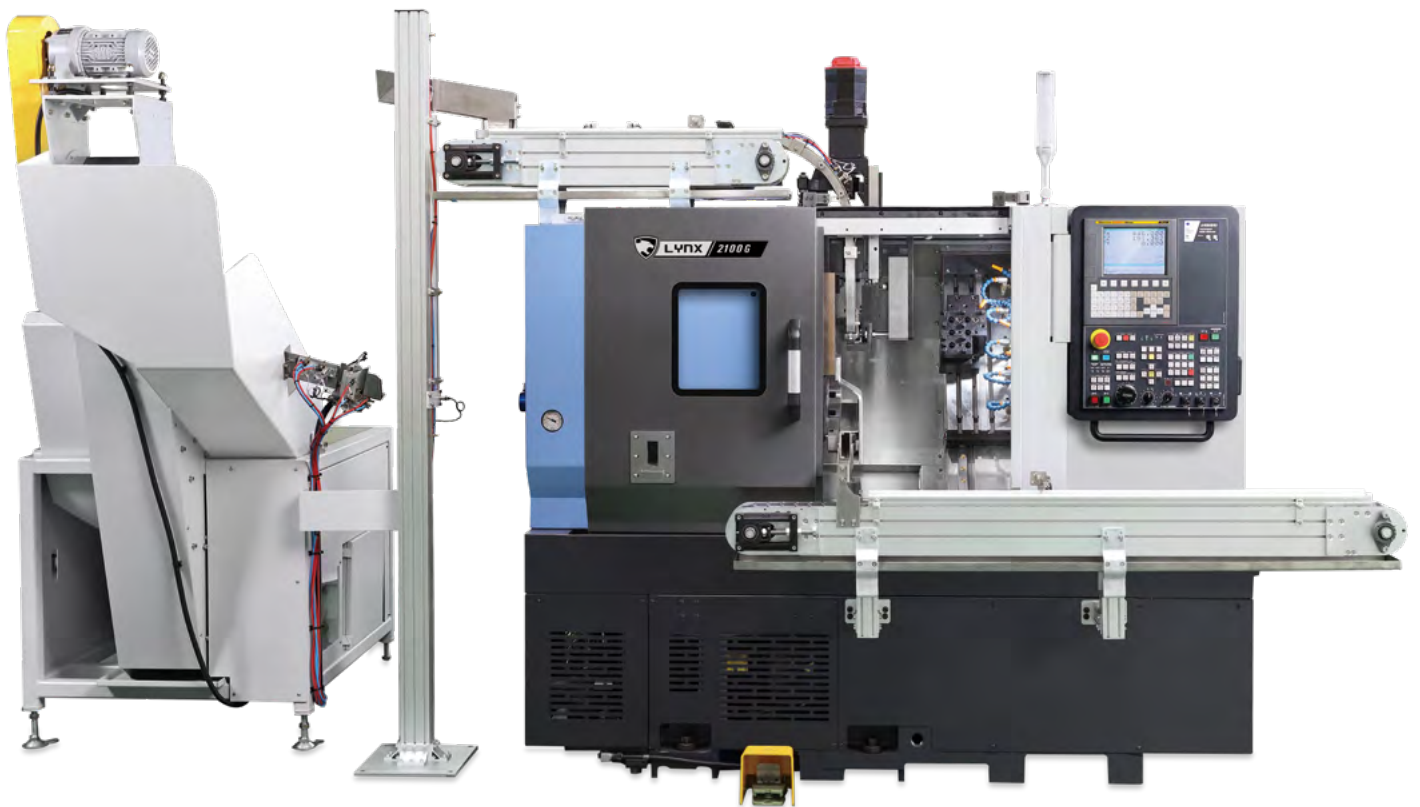


DN SOLUTIONS

Lynx 2100G

The 6" chuck Lynx 2100G is a compact gang-type turning centre that, with its onboard thermal compensation, delivers high productivity and accuracy during long and extended machining runs. The machine can be easily automated thereby improving its performance still further.





OUTSTANDING PERFORMANCE

- Powerful cutting capacity with a maximum 18.5kW spindle power
- Improved spindle frame and the low-vibration structure of the machine's feed axes and bed surface deliver higher productivity over long periods of operation.

SPATIALLY EFFICIENT DESIGN AND CONFIGURATION

- Compact footprint with over a 20% larger machining envelope compared to previous model
- Use of right side and rear side chip conveyor enables chip disposal direction to change without changing coolant tank

ENHANCED OPERATION AND EFFICIENCY

- Eco-friendly grease lubrication for easy maintenance and cost savings.
- Easy to integrate and install automation systems with minimal disruption

BASIC STRUCTURE

60° slant integral type bed with Roller type LM guideways on all axes ensures low vibration and high efficiency chip disposal.

Rapid traverse

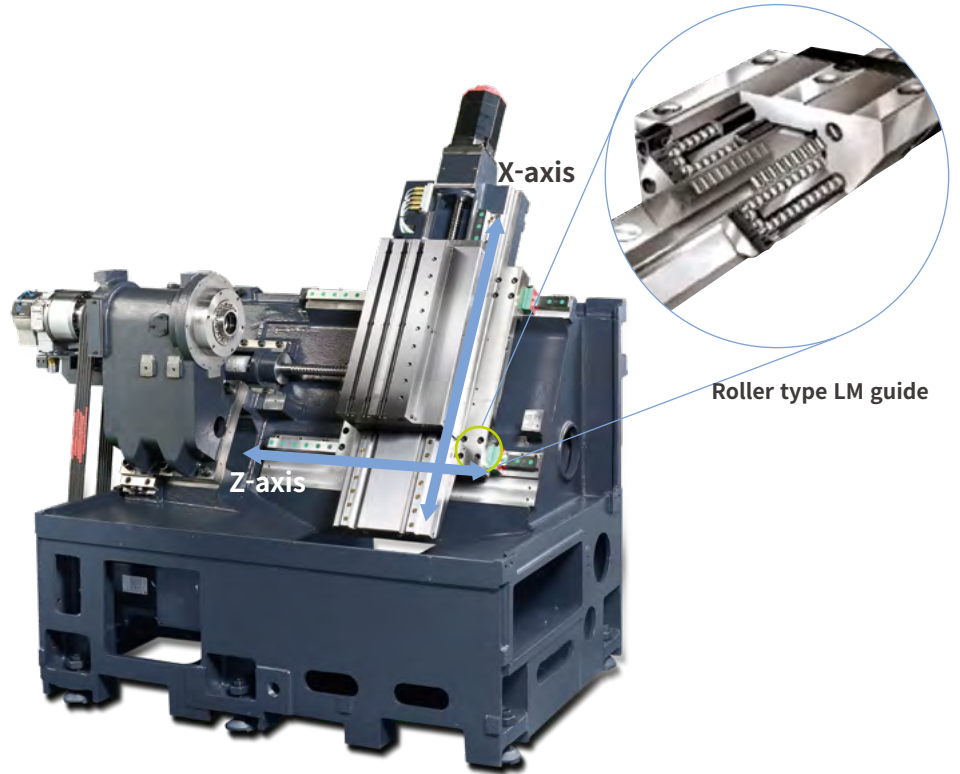
X-axis **30** m/min
1181.1 ipm

Z-axis **36** m/min
1181.1 ipm

Travel distance

X-axis **450** mm
17.7 inch

Z-axis **340** mm
13.4 inch



LARGEST MACHINING AREA

Ø170 X 330 mm maximum machining area and 51mm bar working diameter provide the largest machining capacity in the 6" chuck class.

Chuck size

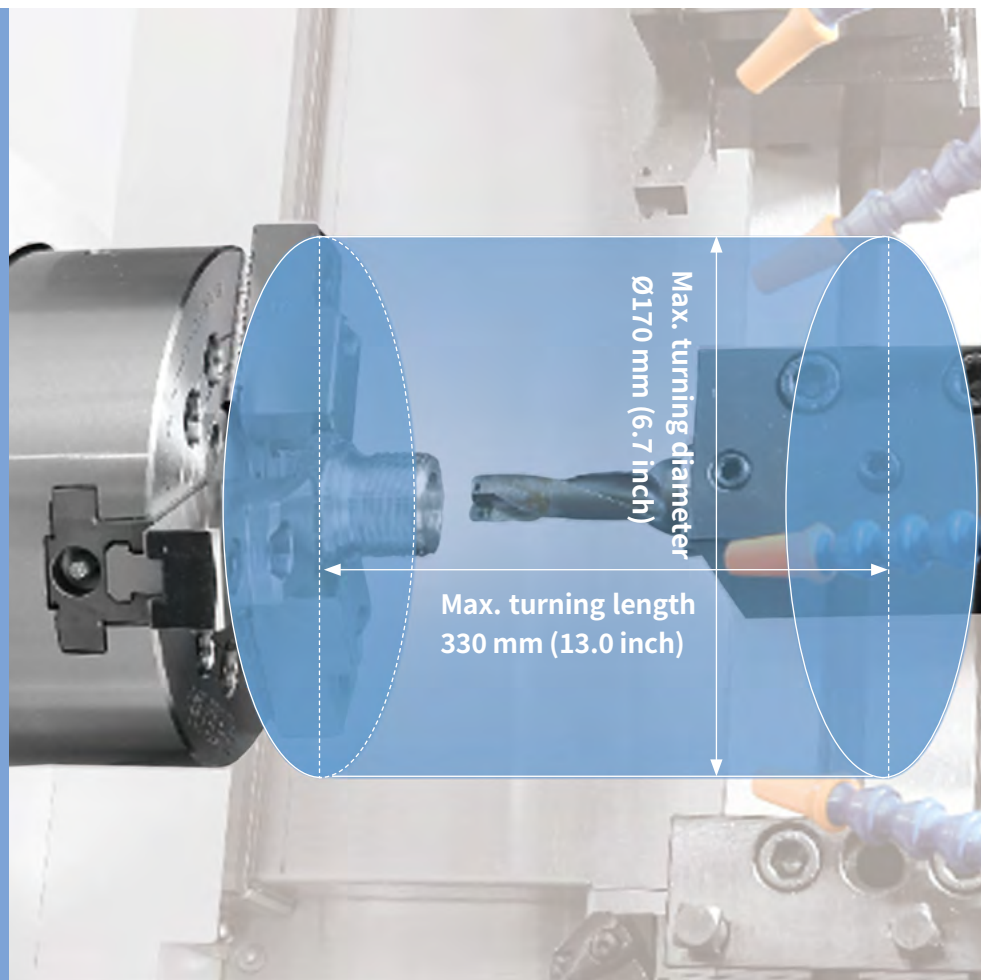
6 inch

Machining area

Ø170 X 330 mm
6.7 x 13.0 inch

Bar working diameter

45 {51 OPTION} mm
1.8 {2.0} inch



SPINDLE

By incorporating a powerful 18.5kW spindle with integrated thermal compensation into the machine, the Lynx 2100G delivers the highest levels of productivity irrespective of whether performing high precision or heavy duty cutting operations.

Max. speed

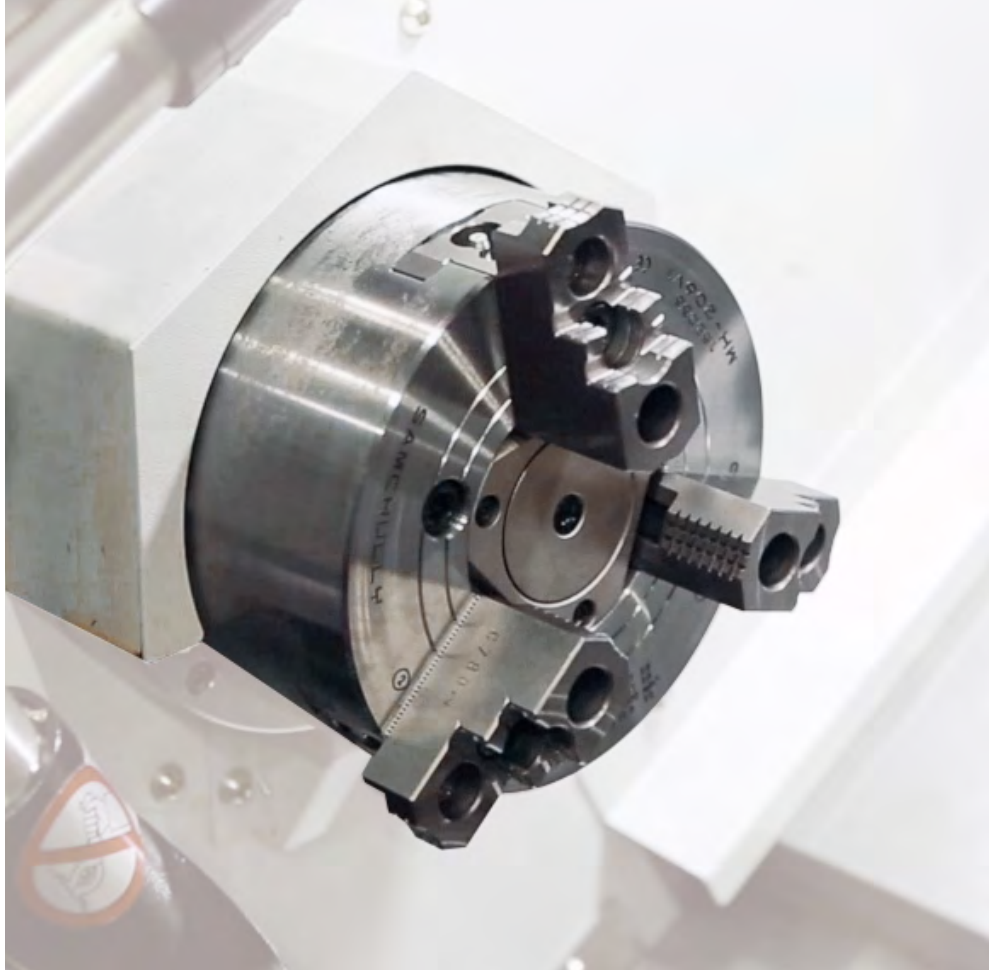
6000 r/min

Max. power

18.5 kW (Fanuc)
24.8 Hp

Max. torque

118 N·m (Fanuc)
87.1 lbf-ft



SPACE EFFICIENCY

The machine's compact structure makes it easy to install even in tight spaces.

Foot print

Min. **20%** ↓



MACHINING PERFORMANCE

The machine's strong cutting performance ensures best-in-class productivity.



Material : Carbon Steel(SM45C)

Compared to previous model **15% ↑**

O.D turning	
Cutting speed (m/min (ipm))	358 (14094.5)
Feed (mm/rev (ipr))	0.3
Spindle speed (r/min)	1500
Cutting depth (mm (inch))	3.5 (0.1)
Chip removal rate (cm ³ /min (inch ³ /min))	393 (24.0)



Material : Carbon Steel(SM45C)

Finish I.D turning **4.0 D**

I.D turning (Rough / Finish)	
Cutting speed (m/min (ipm))	200/200 (7874.0/7874.0)
Feed (mm/rev (ipr))	0.3/0.1(0.0/0.0)
Spindle speed (r/min)	863/798
Tool diameter (mm (inch))	40/40 (1.6/1.6)
Tool length (mm (inch))	3.5D/4.0D(0.1/0.2)



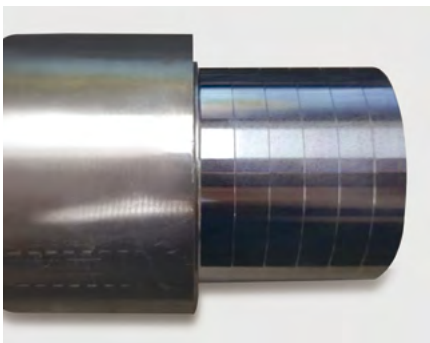
Material : Carbon Steel(SM45C)

Compared to previous model **15% ↑**

U-drilling	
Cutting speed (m/min (ipm))	80 (3149.6)
Feed (mm/rev (ipr))	0.15 (0.0)
U-drill dia.(mm (inch))	27 (1.1)
Chip removal rate (cm ³ /min (inch ³ /min))	179 (10.9)

MACHINING ACCURACY

Reduced vibration and compensating for and controlling thermal displacement ensure machining stability and longer tool life.



Material : Aluminium

Compared to previous model **60% ↑**

Roundness	
Cutting speed (m/min (ipm))	0.1 (0.0)
Feed (mm/rev (ipr))	0.2 (0.1)
Spindle speed (r/min)	4000
Roundness (μm)	0.7
Roughness (μm)	Ra 0.14



Material : Aluminium

Compared to previous model **45% ↑**

Ball machining roundness	
Roundness (μm)	0.7
Roughness (μm)	Ra 0.97

FULLY-CUSTOMIZED AUTOMATION

In order to get the most, and the best, from DN Solutions and to ensure that customers can achieve the highest levels of machining flexibility and productivity now and in the future, we can provide and integrate proven automation solutions to our machines, and help in the design and development of turnkey and process improvement solutions for customers.

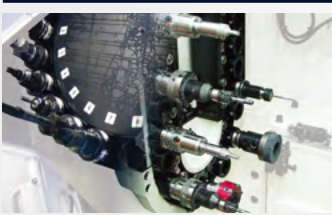
Fixture



Chuck



Tool



Gantry loader



Robot



LPS (Linear pallet system)

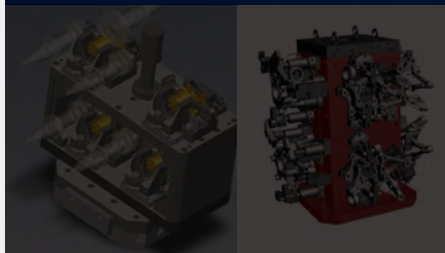


Technical consultation



Investment feasibility studies

Application



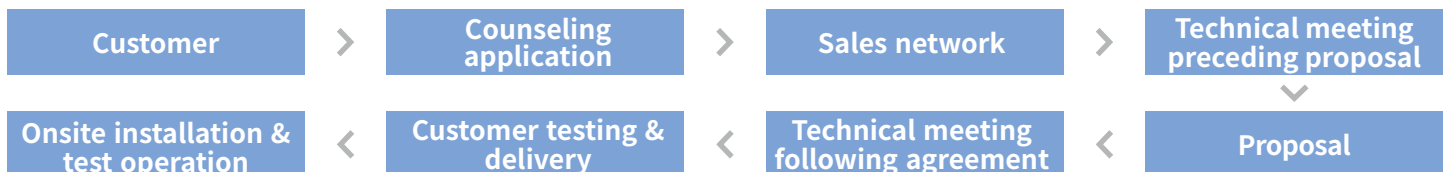
Process design, manufacturing and testing

Technical validation



Differentiated engineering such as productivity and process reliability

Customer Support Process



BEARING AUTOMATION SOLUTION

Optimized solution for the machining of bearings. Optimised load and unload system delivers unrivalled productivity.

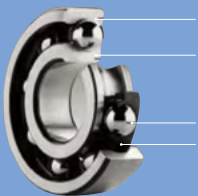


Ball Bearing

Taper Bearing

Thrust Bearing

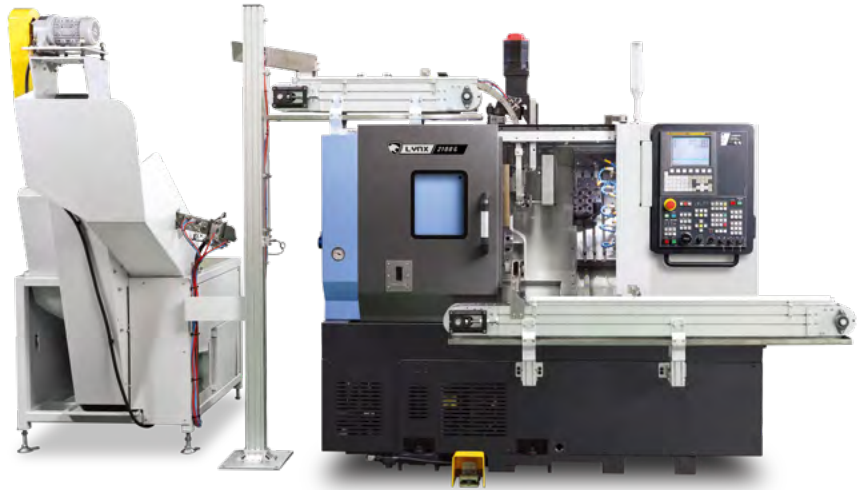
Ball Bushing Bearing



Outer Race

Inner Race

Rolling Elements "Balls"
Cage



Improved bearing loading/unloading time

Previous model

4 ~ 5 sec

50% Improved

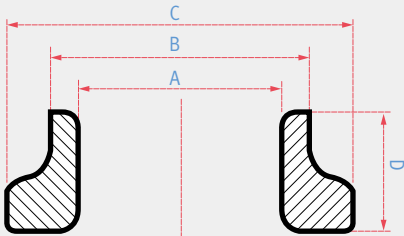
Lynx 2100G

2.99 sec



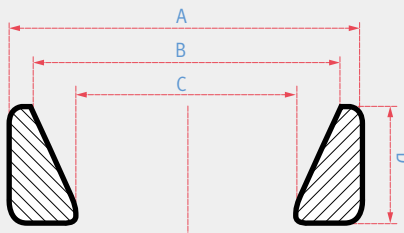
Workpiece range

INNER



Group	A (Ø)	B (Ø)	C (Ø)	D (mm)
A	25 ~ 49	15 ~ 41	10 ~ 34	10~25
B	49 ~ 70	41 ~ 53	34 ~ 44	10~35
C	70 ~ 90	63 ~ 72	53 ~ 62	25~50

OUTER

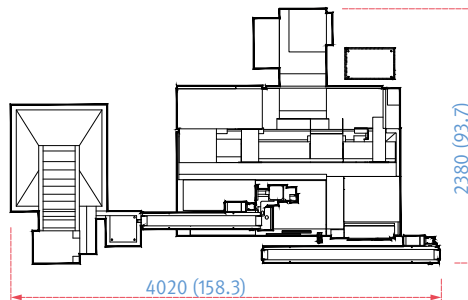


Group	A (Ø)	B (Ø)	C (Ø)	D (mm)
A	25 ~ 49	20 ~ 41	15 ~ 35	10~25
B	49 ~ 70	41 ~ 60	34 ~ 50	10~35
C	70 ~ 90	63 ~ 70	60 ~ 69	25~50

External dimensions

TOP VIEW

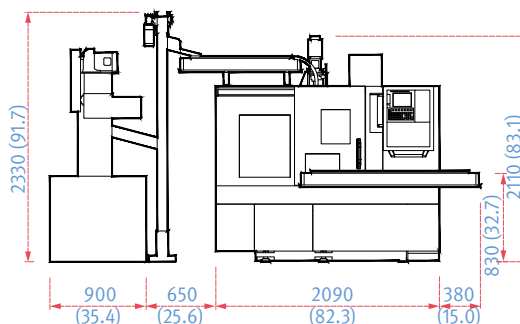
Unit : mm (inch)



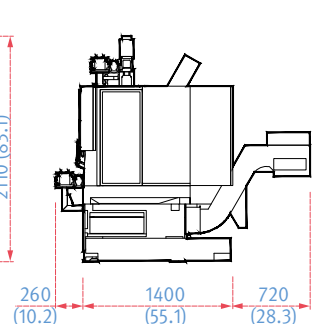
System configuration

- ① New Solution with Lynx 2100G
- ② Chip conveyor
- ③ Transformer
- ④ Hopper
- ⑤ Elevator
- ⑥ Upper conveyor
- ⑦ Lower conveyor

FRONT VIEW



SIDE VIEW




STANDARD | OPTIONAL SPECIFICATIONS

A range of options is available to suit individual requirements.

Description	Features	Lynx 2100G
chuck	6 inch	●
	8 inch	○
	No chuck	○
Jaw	Soft Jaw	●
	Hard Jaw	○
Chucking option	DUAL PRESSURE CHUCKING	○
	CHUCK CLAMP CONFIRMATION	○
Tailstock	No Tailstock	●
Coolant pump	1.0 bar	●
	Increase powe (4.5/7/10/14.5/20 bar)	○
Coolant options	Oil skimmer	○
	Coolant pressure switch	○
	Coolant level switch : Sensing level - Empty / Low / Enough / Full	○
	High Coolant Interface	○
	Chuck coolant	○
	Coolant gun	○
Chip disposal options	Rear type chip conveyor	○
	Side type chip conveyor	△
	Chip bucket	○
	Air blower	○
	Mist collector	○
Measuring & automation	Part catcher with parts boX	○
	Part catcher with parts conveyor	○
	Auto door	○
	Cut-Off Confirmation	○
	Work / Tool Counter	○
	Robot interface (PMC I/O, PROFIBUS)	○
Standard devices	Bar feeder interface	○
	Frontdoorinterlock	●
	Manualbook	●
	installationparts	●
	safety sticker	●
	Worklight	●
	Standard operation tools	●
	Footswitch	●
Others	Tool load monitoring system	○
	signal tower	○
	Air gun	○
	Air Conditioner For Electric Cabinet	○
	Light For Electric Cabinet	○
	EXtra M-Code (4ea)	○
	Automation power off	○
Customized Special Option	Sketch-turn S/W	○
	BALL SCREW NUT COOLING_X-AXIS	○
	AIR BLOWER FOR GANG TYPE TOOL HOLDER	○
	COOLANT CHILLER	○
	AUTO WORK MEASUREMENT_OLP40_RENISHAW	○
	CHIP CONVEYOR TYPE_SCREW	○
	AIR LIMIT SENSING ON CHUCK_PREPARATION	○
	WISKER SWITCH FOR CYCLE START	○
	AIR CHUCK PREPARATION	○
	MIST COLLECTOR_0.4KW	○
MIST COLLECTOR_0.75KW	○	
TSC FOR MAIN/LEFT SPINDLE_PREPARATION	○	
TSA FOR MAIN/LEFT SPINDLE_PREPARATION	○	

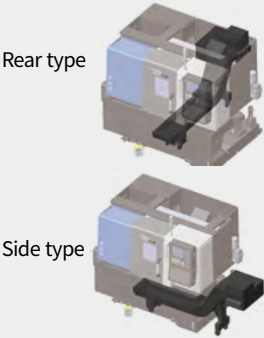
* Please contact DN Solutions to select detailed steady rest specifications

● Standard ● Optional X Not applicable

 Fire Safety Precautions | There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting the controlled and careful use of coolants and modifying the machine without the consent of the manufacturer. Always check the SAFETY GUIDELINES carefully before using the machine.

PERIPHERAL EQUIPMENT

Chip conveyor OPTION



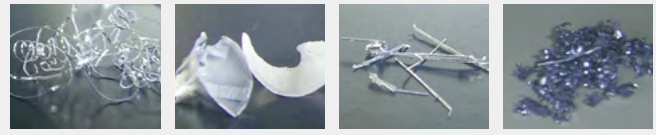
Rear type

Side type

The chip conveyor can be configured in a side or rear layout to meet the demands of the work environment.

** In case of "Long chip" arising, technical consultation is required to check a condition of well-discharging chip disposal.*

Chip conveyor type	Material	Description
Hinged belt	Steel	Most typical type of chip conveyor. Appropriate for steel materials generating chips of length of 30 mm or more.
Screw (auger)	Steel	Chip conveyor with smallest footprint. Demands 80% of footprint comparing to hinged belt.
Magnetic scrapper	Cast iron	Chip conveyor with magnet equipped: Appropriate for cast iron workpieces generating fine chips.



Material Chip conveyor type	Carbon steel			Cast iron		Aluminium		
	Long	Short	Needle	Short	Needle	Long	Short	Needle
Hinged belt type*	○	△	X	△	X	○	△	X
Magnetic scrapper type**	X	○	△	○	△	X	○	△

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

Hinged belt type*

Most common type of chip conveyor. Appropriate for steel materials generating chips over 30mm.

Drum filter type**

Chip conveyor with a magnet: Appropriate for machining cast iron and the generation of fine chips.

Grease lubrication system

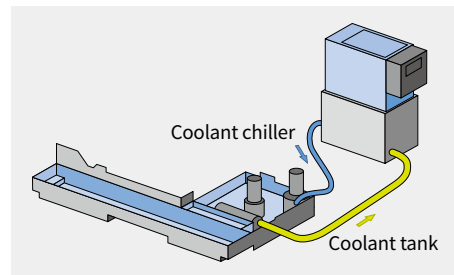
Yearly maintenance cost

MAX. 80% ↓



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

Coolant chiller (recommended) OPTION



A coolant chiller is recommended to help prevent temperature rises and to reduce thermal deformation when using a water-insoluble coolant or high-pressure coolant system (i.e., power over 1.5kW).

Oil skimmer OPTION

The oil skimmer keeps coolant and lubricant isolated from each other to extend the lifecycle of coolant.



Dust collector OPTION

The dust collector absorbs airborne oil vapor and fine dust in the system to improve working environment.



Part catcher OPTION

The part catcher automatically accepts parts completed of machining, and ejects them out of the system.



Collet chuck OPTION

The collet chuck is ideal for loading workpiece of small diameter and light weight.



Coolant blower OPTION



Signal tower OPTION

Device to show present statuses of the machine.

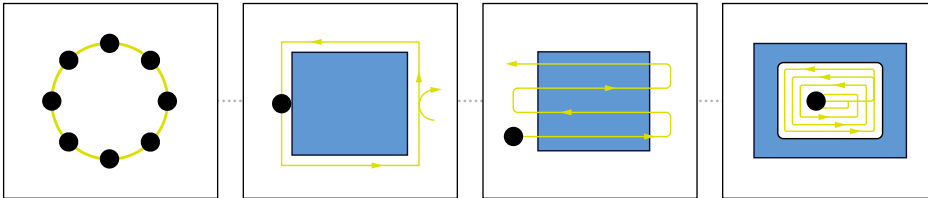


DN SOLUTIONS FANUC i PLUS

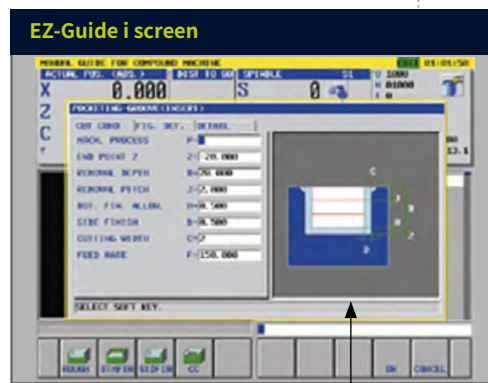
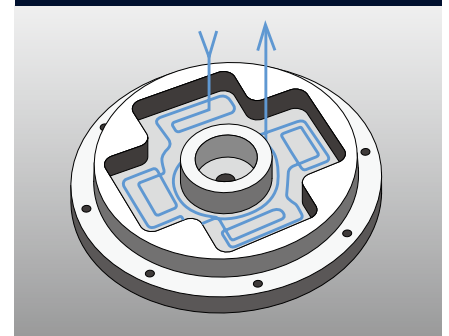
EZ-Guide i

Using the DN Solutions EZ-Guide i, users can create a cutting program for any desired shape, including patterns, by entering just the dimensions.

Example programming : Cutting shape



Example part



Enter the dimensions of the shape

Automatic creation of cutting program

```
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.

EZ Work

DN Solutions's EZ Work supports the user with functions relating to tool data, error diagnostics, set up and machine monitoring.

DOOSAN TOOL LIFE MANAGEMENT V1.1

TOOL LIFE MANAGEMENT SYSTEM					
T-NO	LIFE	COUNT	T-NO	LIFE	COUNT
1	0	0	6	0	0
2	0	0	7	0	0
3	0	0	8	0	0
4	0	0	9	0	0
5	0	0	10	0	0

NUM=)

MDI **** 15:22:36

CLEAR ALLCLR

Tool life management

Enable to check tool life and counter function for each tooling in one screen.

DAILY PRODUCT COUNT V1.0

WORK TYPE NO	1	USE	OFF
PROGRAM NO	00000	DATE	2019/01/31
	VOLUME	% 0%	50% 100%
TARGET	0	0	
SELF CHECK	0	0	
PRODUCT	1	0	

DAILY TOTAL : 1

NUM=)

MDI **** 15:20:50

BEFORE RESET USE SETSCN

Daily production count

Managing production volumes by counting the number of each machining program running on the machine.

TOOL LOAD MONITORING SYSTEM V1.1

TOTAL USED TOOL: 0 / 0

DEFAULT MODE					
T:	0	PRESENT	MAX	BROK	WARN
AXIS X+		0.00	0.00	0.00	0.00
X-		0.00	0.00	0.00	0.00
Z+		0.00	0.00	0.00	0.00
Z-		0.00	0.00	0.00	0.00
SPD S		0.00	0.00	0.00	0.00

PRESENT TOOL NO 0

NUM=)

EDIT **** 16:05:54

AUTO CLEAR RESET EXPAND SET

Tool load monitoring

During cutting operation, abnormal load caused by wear or damage of the tool is detected and an alarm is triggered to prevent further damage.

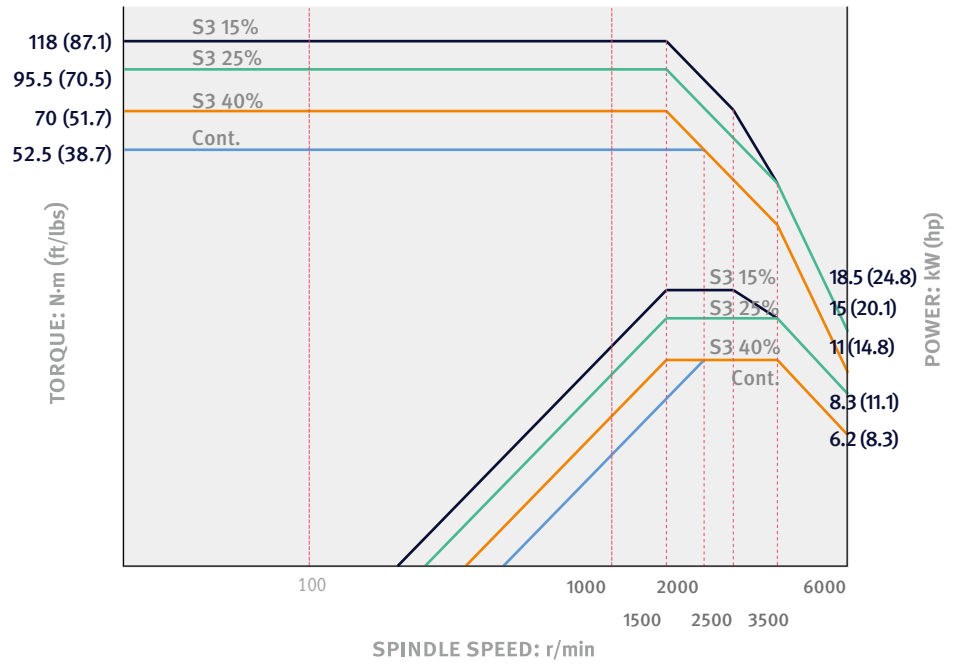
POWER | TORQUE | TOOLING SYSTEM

DN Solutions Fanuc i Plus

Max. spindle speed : **600 r/min**

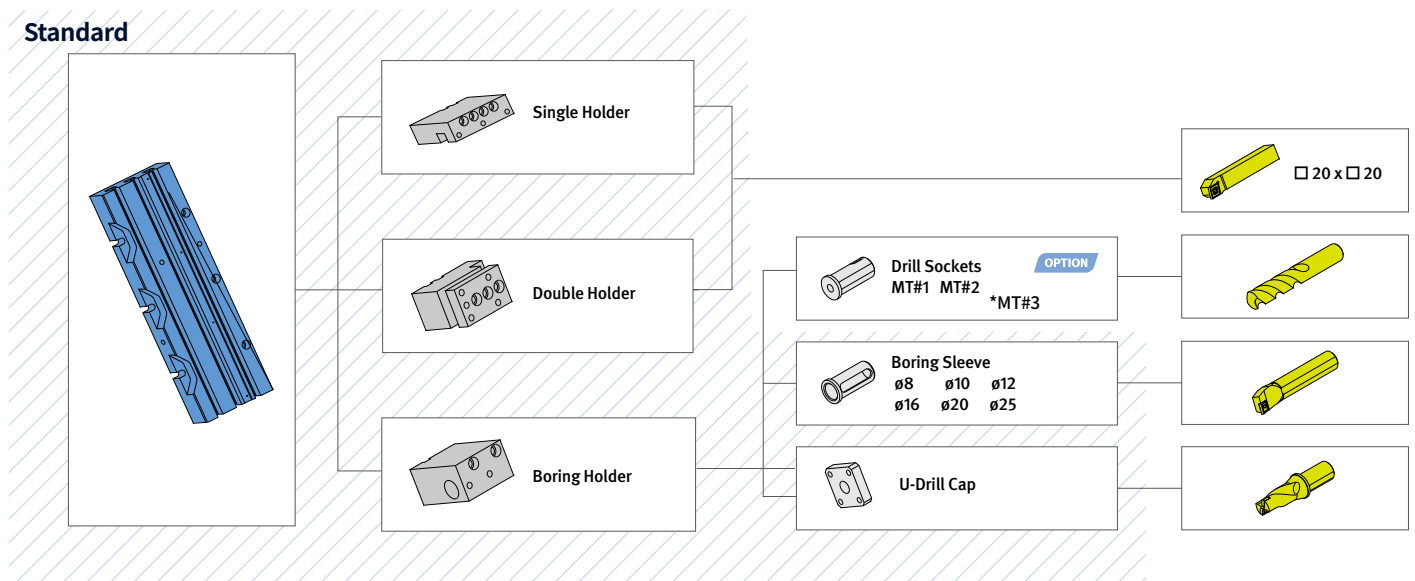
Max Torque : **118 N·m**
87.1 lbf-ft

Max. power : **18.5 kW**
24.8 Hp



Tooling system

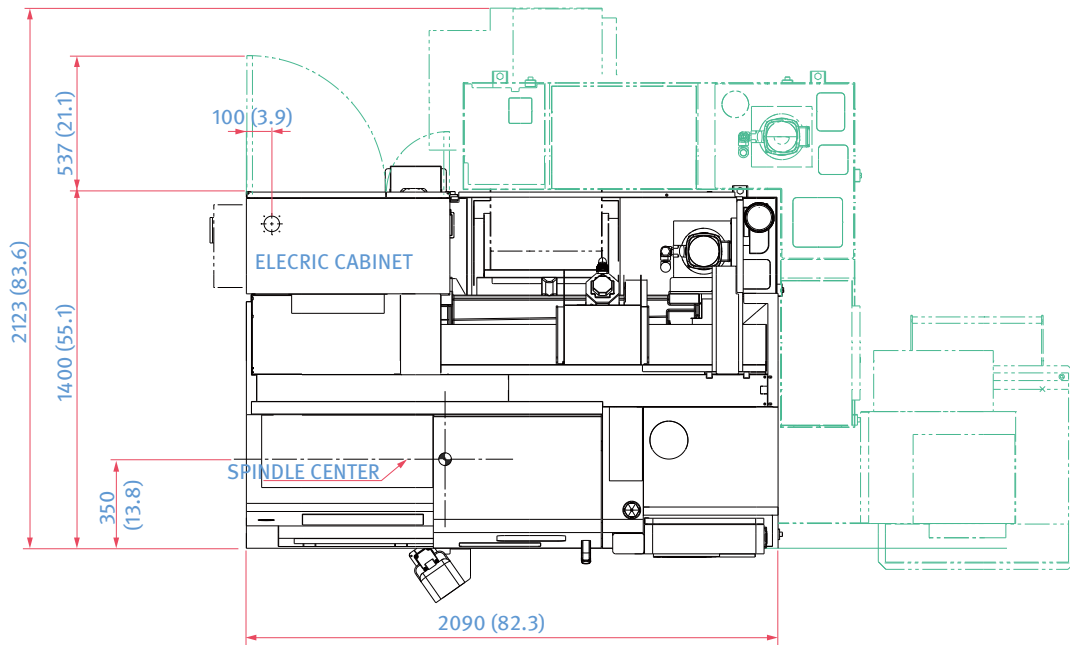
Unit : mm (inch)



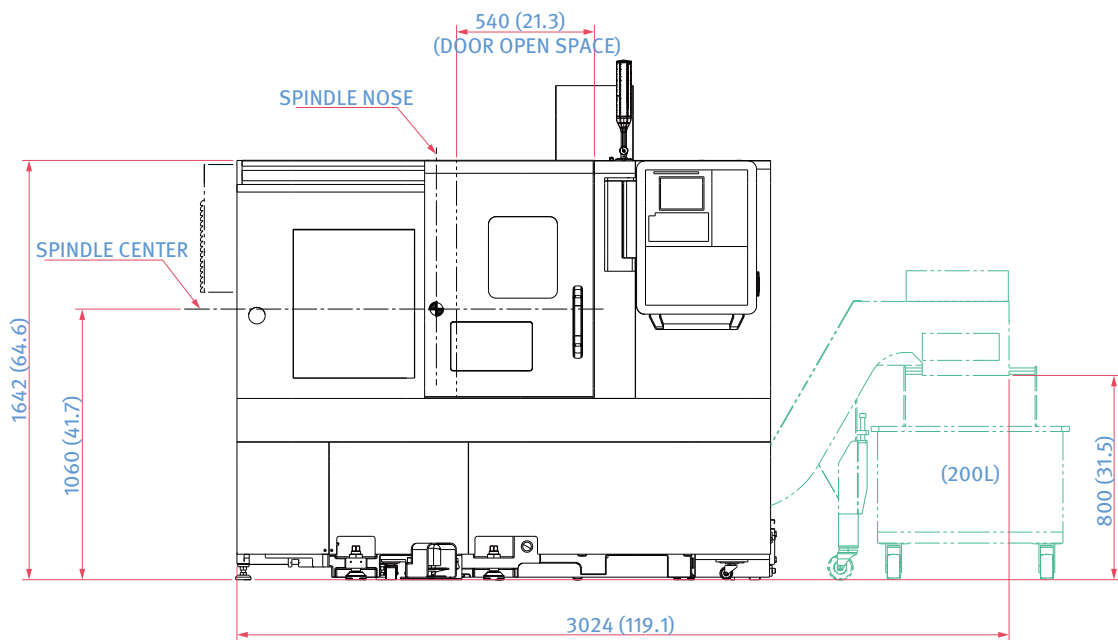
EXTERNAL DIMENSIONS

TOP

Unit : mm (inch)

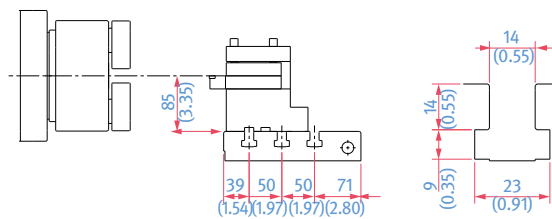
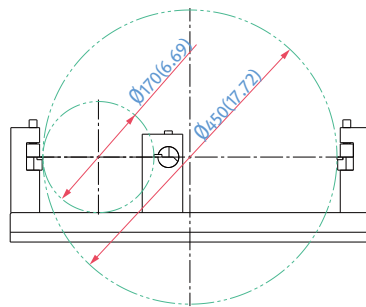
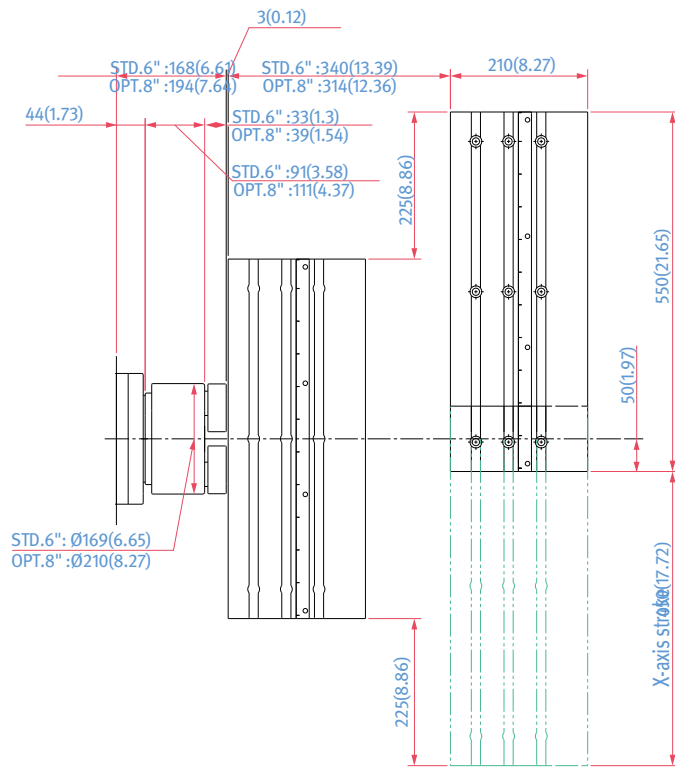


FRONT



WORKING RANGE

Unit : mm (inch)



MACHINE SPECIFICATIONS

Description		Unit	LynX 2100G
Capacity	Swing over bed	mm (inch)	535 (21.1)
	MaX. Turning diameter	mm (inch)	170 (6.7)
	MaX. Turning length	mm (inch)	330 (13.0)
	Chuck size	inch	6 {8}*
	Bar working diameter	mm (inch)	45 {51}*
Travels	Travel distance	X aXis	mm (inch) 450 (17.7)
		Z aXis	mm (inch) 340 (13.4)
Feedrates	Rapid traverse rate	X aXis	m/min (ipm) 30 (1181.1)
		Z aXis	m/min (ipm) 36 (1417.3)
Spindle	MaX. Spindle speed	r/min	6000
	Main spindle motor power (S3 15%/S3 25%/Con.)	kW (Hp)	18.5/15/11 (24.8/20.1/14.8)
	MaX. Spindle Torque for Turning	N · m (ft-lbs)	118 (87.1)
	Spindle nose	ASA	A2-5
	Spindle bearing diameter (Front)	mm (inch)	90 (3.5)
	Spindle through hole diameter	mm (inch)	61 (2.4)
Tool post	Tool Holder Type	-	Gang Type
	OD tool size	mm (inch)	20 X 20 (0.8X0.8)
	MaX. boring bar size	mm (inch)	32 (1.3)
Power source	Electric power supply(rated capacity)	kVA	21.91
Machine Dimensions	Length	mm (inch)	2090 (82.3)
	Width	mm (inch)	1400 (55.1)
	Height	mm (inch)	1935 (76.2)
	Weight	kg (lb)	2900 (6393.3)
Control	CNC system	-	DN Solutions Fanuc i Plus

{ } : Option

The DN Solutions promise, MACHINE GREATNESS, has two important meanings. The first is simple: DN Solutions makes great machines. The second is a challenge to our end-users. With a product line that is this comprehensive, accurate and reliable, we equip our customers to machine greatness. **The big question: *Why should you choose DN Solutions over other options?***

Here's why...



**MACHINE
GREATNESS™**



WHAT YOU MAKE AND HOW YOU MAKE IT MATTERS—SO MAKE IT
GREAT WITH DN SOLUTIONS.

UNBEATABLE MACHINES

You won't find a more comprehensive range or a better combination of value, performance and reliability anywhere else.

ROBUST PRODUCT LINE

We offer an impressive range of machine models and hundreds of configurations. Whatever your machining needs and requirements, there's a DN Solutions for you.

READILY AVAILABLE - ANYWHERE IN THE WORLD

Machining centres (including 5-axis machines), lathes, multi-tasking turning centres and mill-turn machines, and horizontal borers with best-in-class specifications are all available...ready to install.

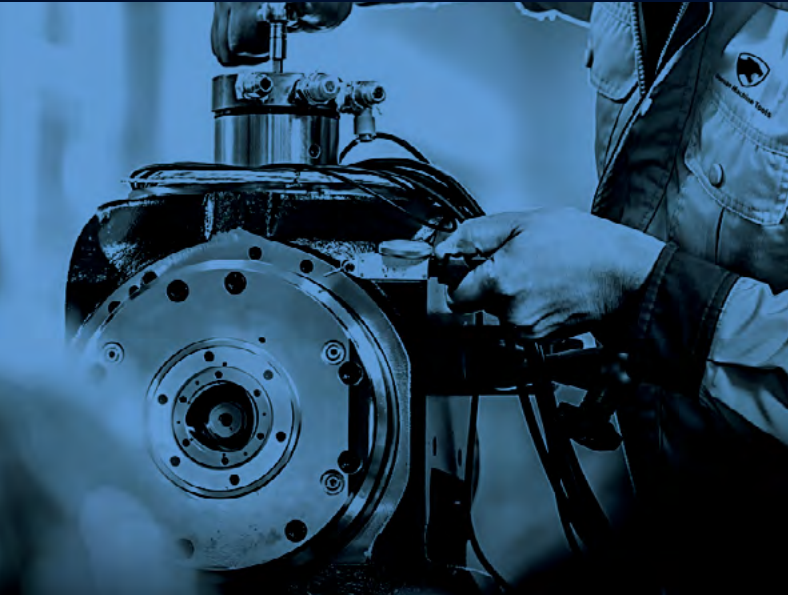
EXPERT SERVICE

Our dedicated, experienced and knowledgeable team is totally committed to improving your productivity, growth and success.

CUSTOMER SUPPORT AND SERVICES

We're there for you whenever you need us.

We help our customers operate at maximum efficiency by providing them with a range of tried, tested and trusted services - from pre-sales consultancy to post-sales support.



FIELD SERVICES

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

PARTS SUPPLY

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



TRAINING

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

TECHNICAL SUPPORT

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

RESPONDING TO CUSTOMERS ANYTIME, ANYWHERE

DN Solutions Global Network

DN Solutions provides systems-based professional support services, before and after the machine tool sale, by responding quickly and efficiently to customers. By supplying spare parts, product training, field service and technical support, we provide the expert care, attention and assistance our customers expect from a market leader.



Global sales and service support network

4	Corporations
156	Dealer networks
51	Technical centers Technical Center, Sales Support, Service Support, Parts Support
200	Service posts
3	Factories





dn-solutions.com

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* For more details, please contact DN Solutions.

* Specifications and information contained within this catalogue may be changed without prior notice.