MiCROCUT

LD Series

Twin-Spindle Single Turret Slant Bed CNC Lathe

National Award of Outstanding

ISO 9001:2015 FM 538421

ISO 14001:2015 EMS 546518

ISO 50001:2011 ENMS 642457

LD Series

Twin-Spindle Single Turret Slant Bed CNC Lathe

Flexible, Efficiency and Productivity

The LD series turning lathe is capable of multi-axis turning and milling.
The machine is well equipped with twin spindles single turret, live tooling, C-axis, Y-axis and is capable of producing high accuracy parts. Besides, this multi-functional LD series is ready to be implemented for automation. The tool setter and workpiece probe and accessories allow further setup for automated operation to reduce intensive labor costs.

This high quality twin spindle turning lathe not only can do complex machining in one-setup, but is also ideal for tasks requiring long time loading. It highly increases efficiency and productivity, and meets the diversified tasking requirement of production.

LD series is superior for one-setup production of complex works

HIGHLIGHT SPECIFICATION

- Max Turning Diameter Ø380mm
- Max Turning Length 520/1020mm
- Swing over Bed Ø650mm
- Primary Spindle Speed-
  4000rpm(LD-65)
  5000rpm(LD-52)
- Second Spindle Speed- 5000rpm
- Rapid feed rate(X/Y/Z/Z2) -24/6/24/24 m/mir

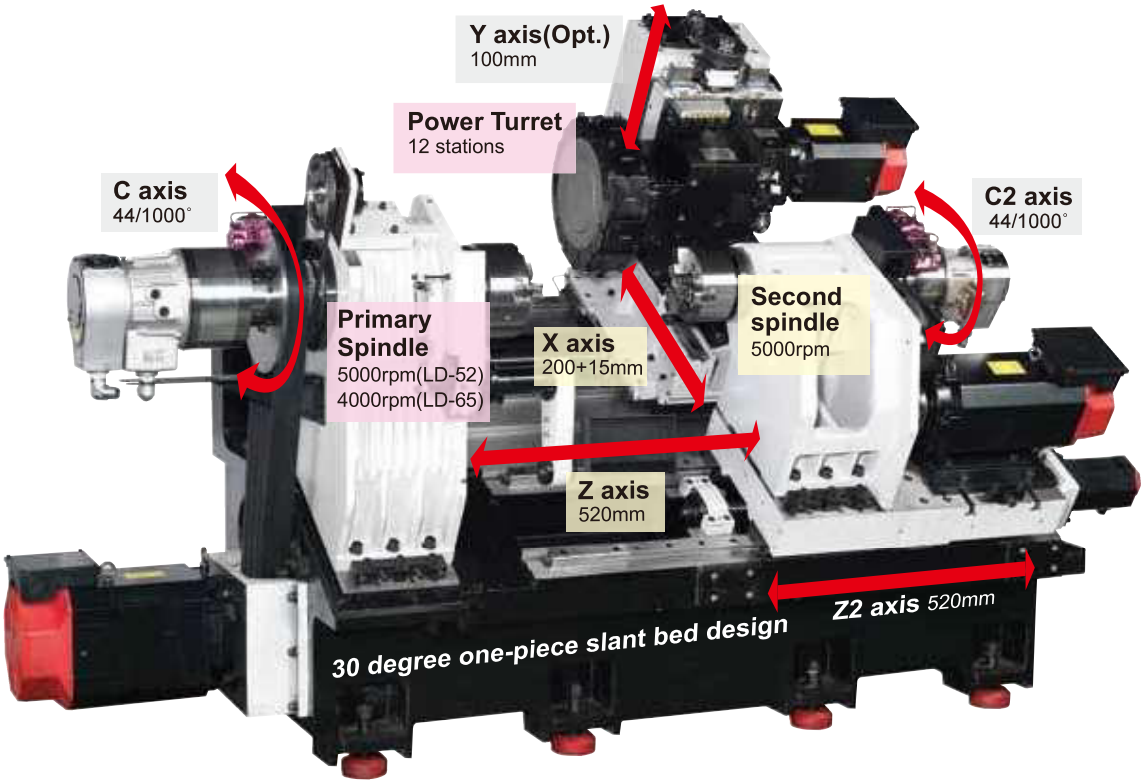
Highlight

- Twin spindle single turret
- Reducing idle time
- Apply all processes on one machine
- Increase the productivity
- Milling and Turning in one-setup
- 30° one-piece slant bed for rigid structure
- Reducing frequency of loading & unloading
- Linear way ensures faster movement-Rapid feed 24 m/min
- 8” and 10” Hydraulic chuck

Structure

Design for Stability

- One-piece Meehanite casting base
- Strategic ribbed bed for maximum stiffness
- 30 Degree slant bed for easy chip removal
- Headstock design with optimal heat dissipation
- Compact design with small floor occupation
- Spacious machining area
- Ready for automation



Turret

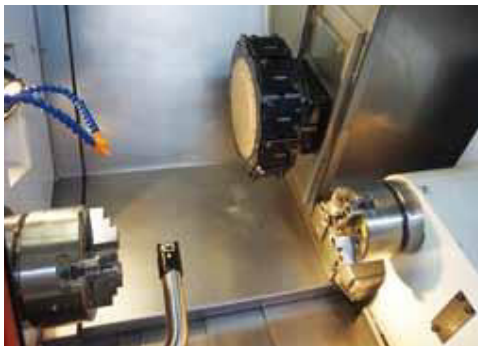
Reliable and rapid turret indexing

To optimize the efficiency and utilization, turret option:

- Power turret driven by servo motor, 12 stations
- Hydraulic turret VDI-30, 12 stations
- Hydraulic turret VDI-40, 12 stations

12-Station BMT-55 Power Turret

Spindle



Fast spindle speed with Powerful 11kW spindle drive

LD-52 Primary spindle/Second spindle : 5000rpm / 5000rpm
LD-65 Primary spindle/Second spindle : 4000rpm / 5000rpm

Large bar capacity

LD-52 Primary spindle/Second spindle : Ø66mm / Ø52mm
LD-65 Primary spindle/Second spindle : Ø75mm / Ø52mm

High productivity for complex machining

Twin-spindle machining increases productivity by reducing part handling.

Rotary C-axis function

C-axis on twin spindles with unlimited rotational positioning allows the machine to perform complex contour machining

Easy maintenance

Cartridge type spindle is easy to replace

Highly rigid spindle with better support combined load

Four angular bearings can accept both radial and axial loads simultaneously.

Axis Transmission

The C3 precision ground ballscrews provide high accuracy and rapid feed rate. All axes are driven with AC servo motors. The high power thrust enables high accuracy cutting.

X/Z/Z2 axes

Servo motor and high precision ballscrew are directly coupled to reduce vibration.

Y axis(option)

Y-Axis transmission is driven by servo motor and belt. The servo motor is well deployed for space-saving.

Guideway

Heavy duty linear guideways supports high stability, high precision and lower vibration during heavy duty machining.

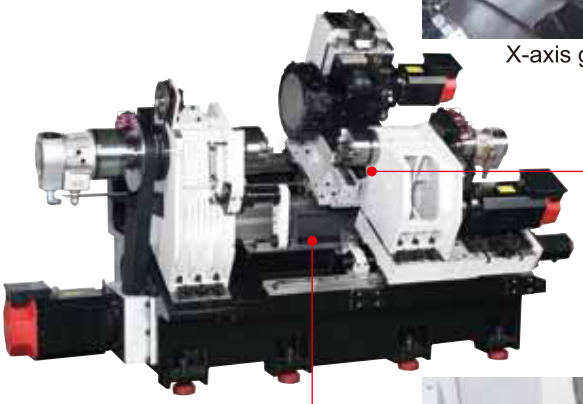
X/Z/Z2 axes ball-type linear guideway

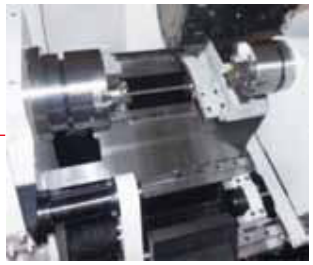
Achieve high precision by greatly enhanced moving accuracy.

Y axis box way

Ensures high stability during cutting

X-axis guideway





Z and Z2 axes guideway

Turning & Milling in One-Setup

The combination of turning and milling brings higher efficiency and enhances the productivity of high complex parts


Y-axis


C-axis

Y-axis(opt.)

The perpendicular motion of ±50mm to X-axis enables diverse and off-center machining for complicated parts.

C-axis with Braking System

Both spindles have C-axis control. C axis with hydraulic braking system provides spindle angle indexing and superior machining performance.

High-efficient Controller

Fanuc 0iTF controller with 10.4" LCD display and Manual Guide i (Opt.)

The optimal ease-of-use controller with large screen provides easy operation. The screen and operation panel can swivel to an optimal position and the screen height is set to fit the ergonomic requirement. USB and Ethernet connection port are designed on the front panel, providing easy usage of memory card or network. The high-tech electric cabinet meets the latest CE regulation.

Accessory

Standard

- Fanuc 0iTF with 8.4” LCD Manual Guide 0i
- Main spindle motor 11/15kW
- Second spindle motor 7.5/11kW
- Heat exchanger for electric cabinet
- Power turret, APEX PT16-16-RB-330, 12-station, BMT55 tooling
- Cooling system
- Hydraulic 3-jaw chuck for LD-52 & LD-65: 8” for primary spindle; 6” for Second spindle
- Foot switch for chuck operation
- Auto lubrication system
- Work lamp
- M30 program stop light
- Hydraulic unit
- Fully enclosed splash guard with interlock safety device
- Tool set & box, level pads, operation manual & parts list

Option

- C axis
- C2 axis
- Y axis
- Oil skimmer
- Chip conveyor
- Air conditioner
- 12-station hydraulic turret, regular type
- 12-station VDI30/VDI40 turret
- 12-station VDI30 power turret
- 12-station VDI30 power servo turret
- 10” Hydraulic 3-jaw chuck for LD-65 primary spindle
- Hydraulic collet chuck
- Tool probe (Automatic / Manual)
- Coolant through tool system (20bar)
- Bar feeder
- Fanuc 0iTF controller with 10.4" LCD display and Manual Guide i
- FANUC α15/7000i 15/18.5 kW for main spindle
- Parts catcher

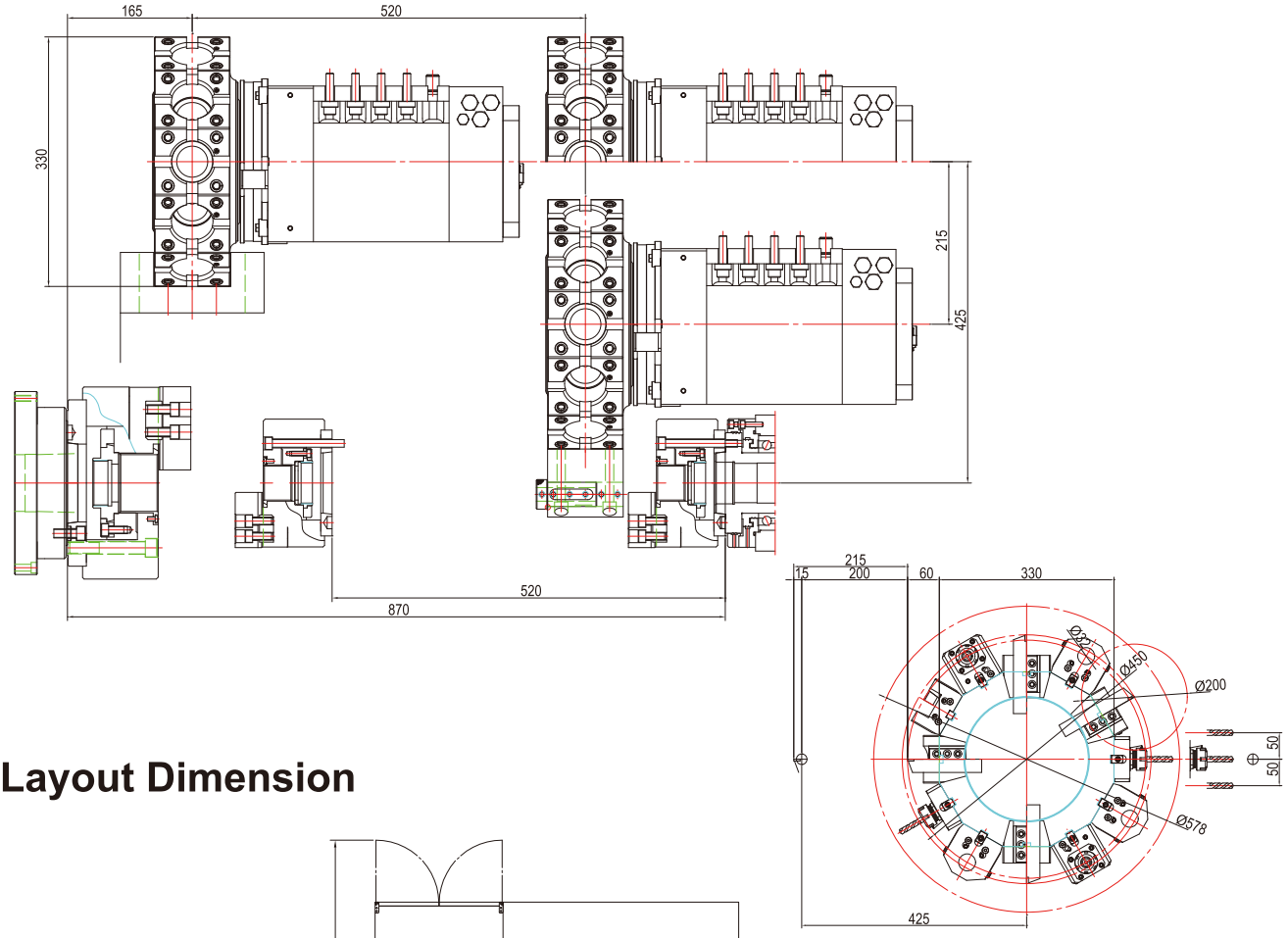

Hydraulic 3-jaw chuck


Tool probe (Automatic/ Semi-automatic)

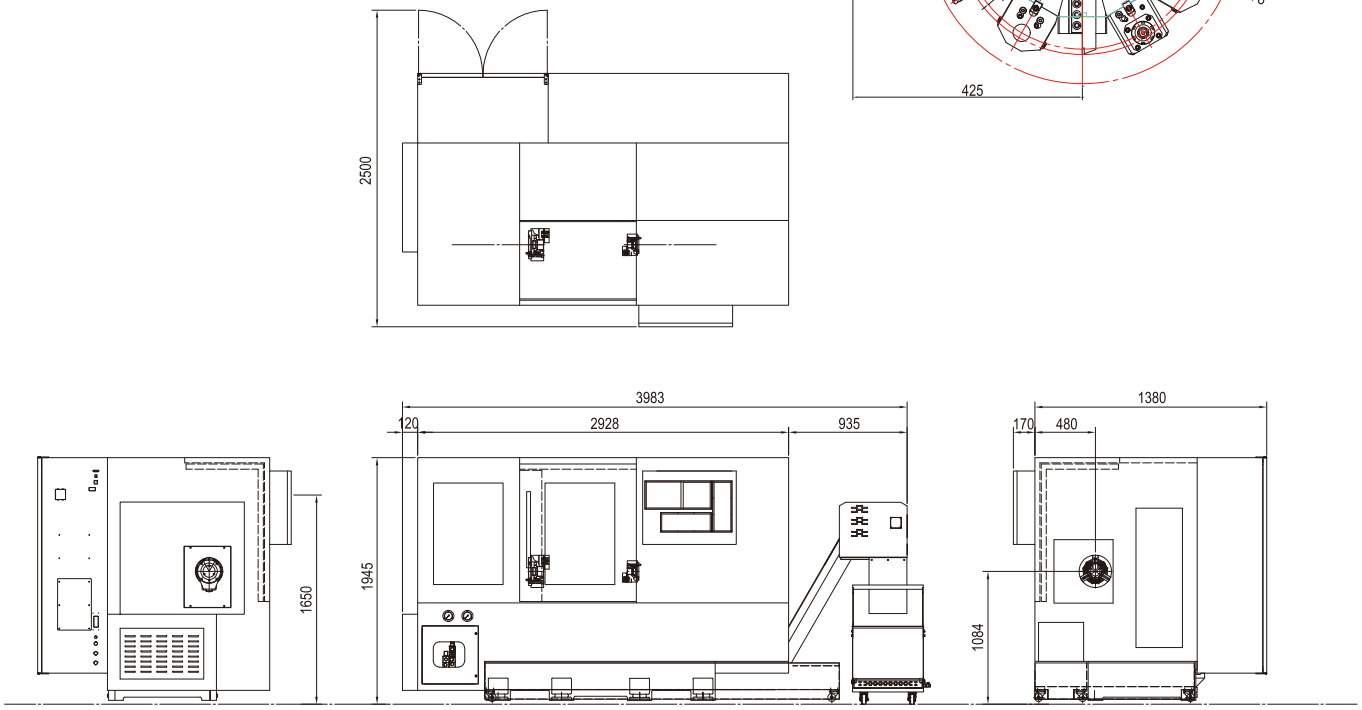

Automatic parts catcher


Bar feeder interface

Interference Drawing



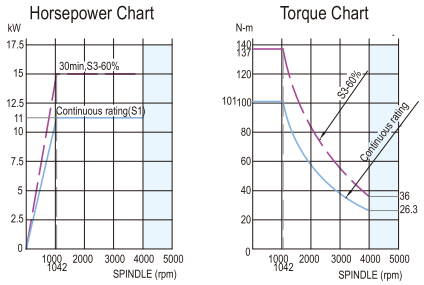
Layout Dimension



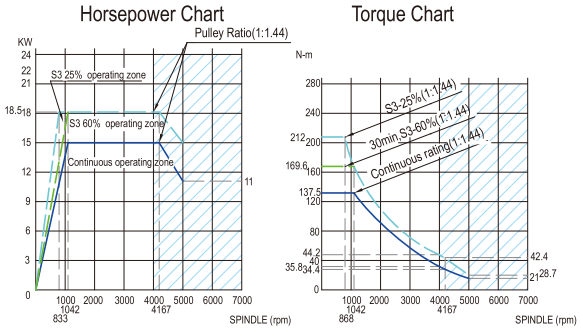
Torque and Power Chart

Primary spindle

Standard

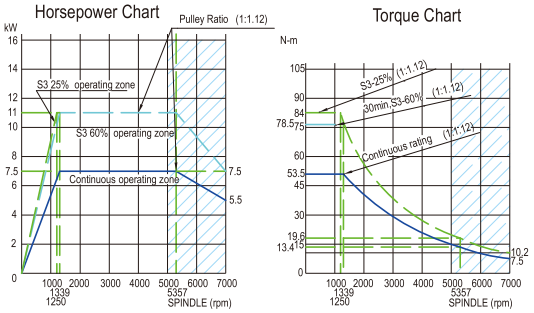


Torque / Horsepower Chart Data				
Spindle Taper	ISO	A2-6(65mm)	Spindle Motor	Fanuc a12/7000i
		-	Motor Output	11/15 kW
		-	Gear Ratio	1:1.44
Spindle Speed	4000		Pulley Ratio	-



Torque / Horsepower Chart Data				
Spindle Taper	ISO	A2-6	Spindle Motor	Fanuc a 15i/7000
			Motor Output	15/18.5kW
			Gear Ratio	-
Spindle Speed	4000 RPM		Pulley Ratio	180/125(1:1.44)

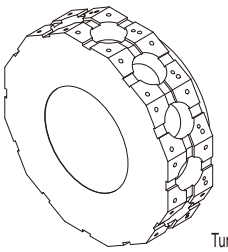
Auxiliary spindle



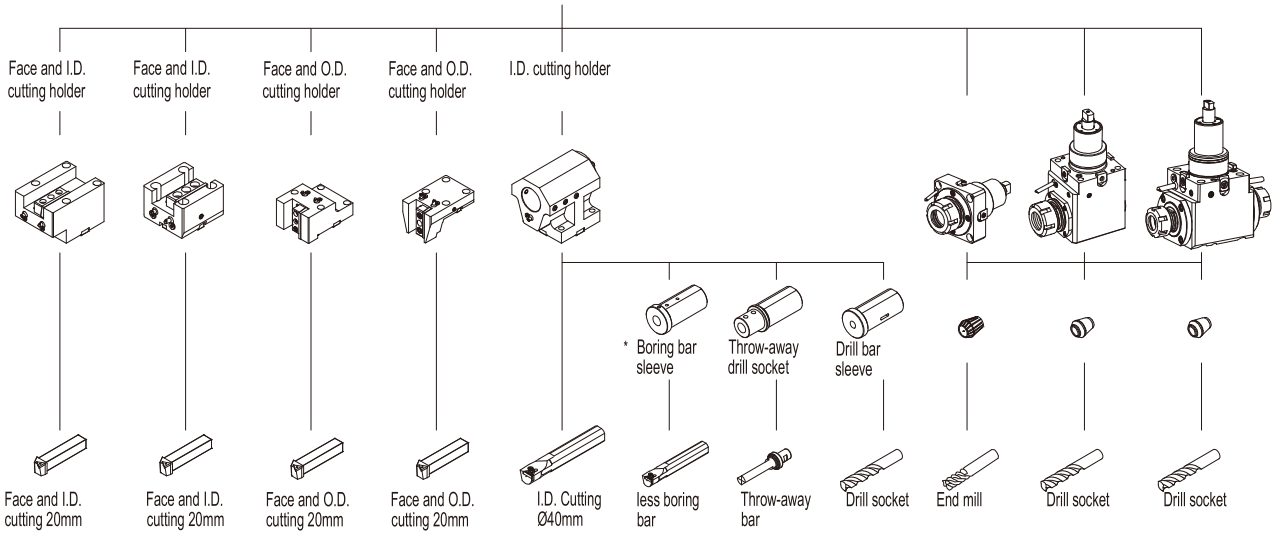
Torque / Horsepower Chart Data				
Spindle Taper	ISO	A2-6	Spindle Motor	Fanuc a 8i/8000
			Motor Output	7.5/11KW
			Gear Ratio	-
Spindle Speed	5000 RPM		Pulley Ratio	140/125(1:1.12)

Tooling System

12-Station BMT-55 Power Turret/ Toolholder 20mm



Turret head



Technical Data

Item	Unit	LD-52	LD-65
Capacity			
Swing over bed	mm	Ø650	
Swing over cross slide	mm	Ø380	
Max. turning diameter(with turret)	mm	Ø380	
Max. turning length(with turret)	mm	520 / 1020	
Slant bed degree	degree	30	
Bar capacity	mm	Ø52	Ø65
Travel			
X axis	mm	215(200+15)	
Y axis (option)	mm	100(±50)	
Z axis	mm	520 / 1020	
Z2 axis	mm	520 / 1020	
Primary Spindle			
Spindle nose		A2-6	
Spindle hole diameter	mm	Ø66	Ø75
Suitable chuck size(option)	mm	200(8")	200(8")
Transmission		Belt	
Spindle speed	rpm	5000	4000
Motor output	kW	Fanuc:11/15	
Second Spindle			
Spindle nose		A2-5	
Spindle hole diameter	mm	Ø52	
Suitable chuck size(option)	mm	150(6")	
Transmission		Belt	
Spindle speed	rpm	5000	
Motor output	kW	Fanuc:7.5/11	
Turret			
Number of tool stations		12	
Tool allowance(square)	mm	25 x 25	
Boring bar dia.	mm	Ø40	
Living tool(Option)			
Tool shank	mm	25 x 25	
Tol holder		VDI-40 / BMT55	
Power rating	kW	3.75	
Maximum speed	rpm	6000	
Axes			
X-Axis rapid feed	m/min	24	
Y-Axis rapid feed(option)	m/min	6	
Z-Axis rapid feed	m/min	24	
Z2-Axis rapid feed	m/min	24	
X-axis ballsrew	mm	Ø32 x P10 x C3	
Y-axis ballsrew	mm	Ø28 x P6 x C3	
X-axis ballsrew	mm	Ø32 x P10 x C3	
Z2-axis ballsrew	mm	Ø32 x P10 x C3	
Motor			
X axis servo motor	Nm	8	
Y axis servo motor(option)	Nm	4	
Z axis servo motor	Nm	8	
Z2 axis servo motor	Nm	8	
Coolant pump motor	W	530 (50Hz) / 750 (60Hz)	
Hydraulic pump motor	W	2200	
Lubrication pump motor	W	30	
Accuracy			
Positioning accuracy	mm	0.01/300	
Repeatability accuracy	mm	±0.01	
Dimemsions			
Lengthw/o chip conveyor	mm	3500	4020
Length w/ chip conveyor	mm	3985	4485
Width	mm	3135	
Height	mm	1950	
Weight	ton	Z 520mm- 5 , Z 1020mm-6.2	Z 520mm- 5 , Z 1020mm-6.2
Total power consumption	KVA	Fagor:20/ Fanuc:25/ Siemens:20	

**Specifications are subject to change without notice.*

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