

FCL-16PTS series

PARALLEL TWIN SPINDLE TURNING CENTER



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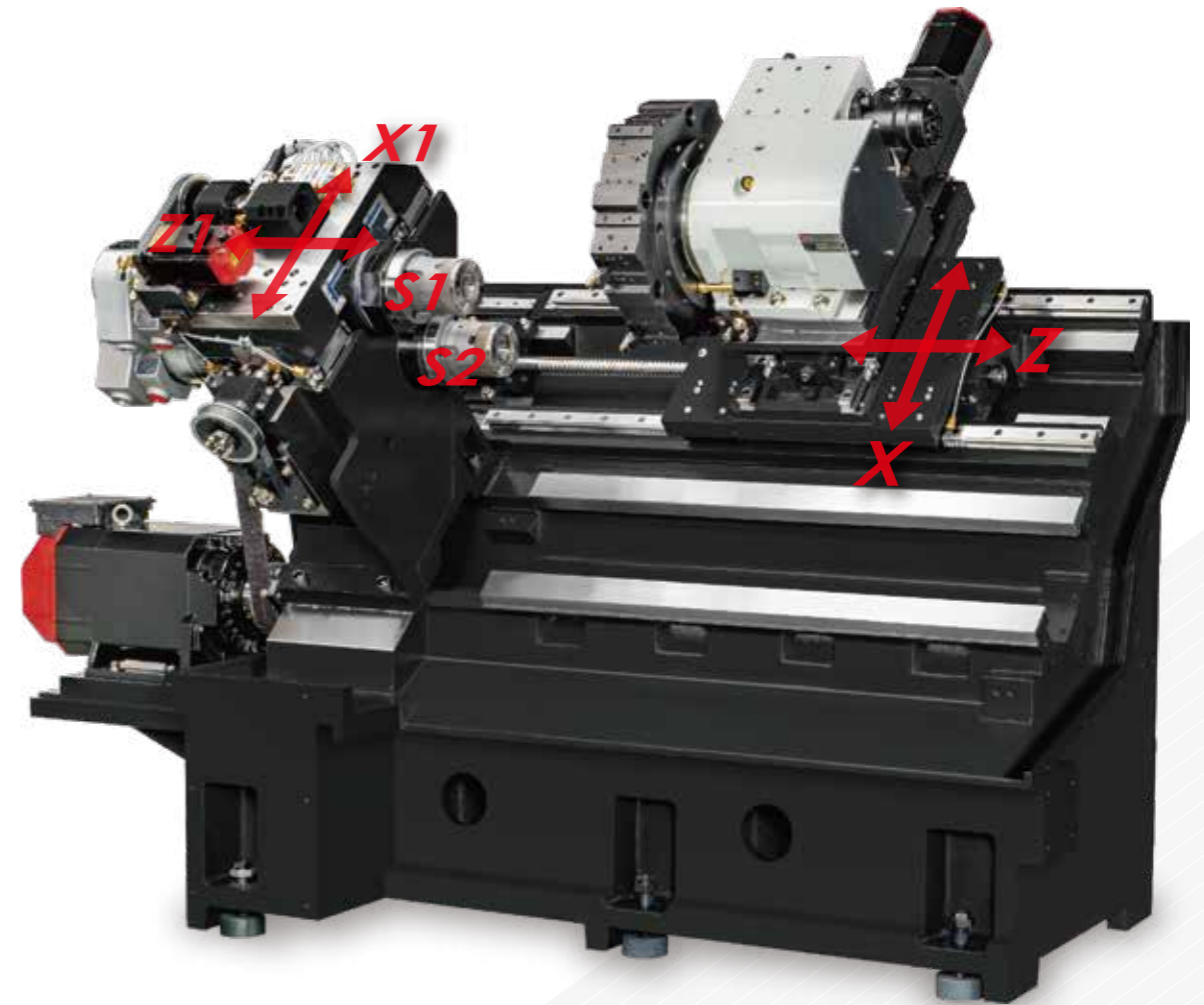
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PATENT No: M612298



FCL-16PTS DOUBLE PRODUCTIVITY IDEAL FOR AUTOMATED PRODUCTION LINES

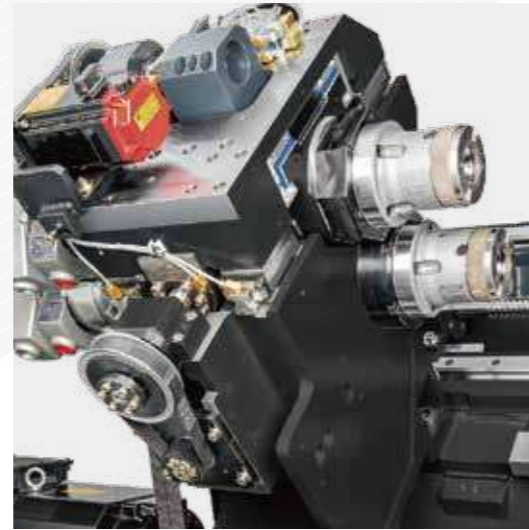
The FCL-16PTS series turning center basic structure is specially designed with 2 sets of parallel spindles featuring a high-efficiency 9-station hydraulic turret. Each station can be equipped with two tool holders, and the loading capacity of the hydraulic turret is 18 tools. This enables the machine to achieve double throughput. In addition, it also dramatically reduces investment costs and electricity consumption, with a space-saving design that creates high productivity per unit area.

A COMBINATION OF LINEAR GUIDEWAYS AND BOX WAYS DESIGN

- X / Z axis are cutting feed axis, which are mounted with precision linear guideways. Rapid traverse rates on X and Z axis can reach 30 m/min for increasing machining efficiency.
- The X1 axis functions as a tool offset axis, which is mounted with precision linear guideways to ensure compensation accuracy. Z1 axis is designed with box ways to ensure superior rigidity.

MACHINE FEATURES PARALLEL TWIN SPINDLE S1/S2

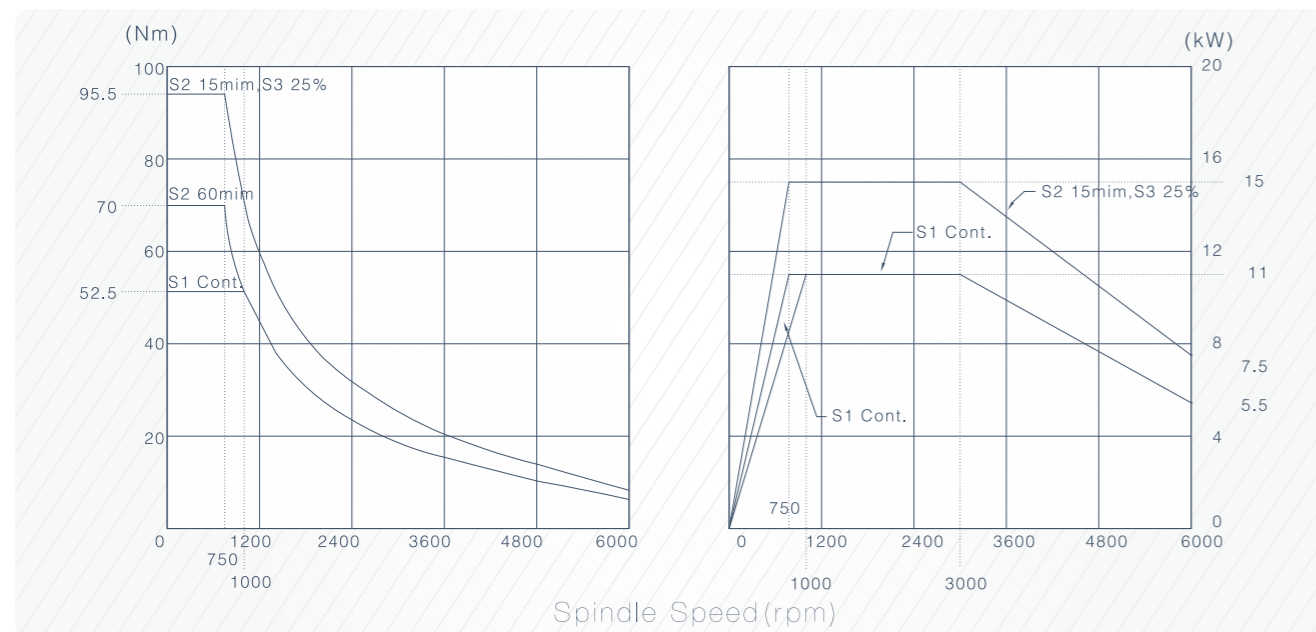
This machine is equipped with a 6000 RPM high speed precision spindle, which is driven by a high torque spindle motor. It provides high machining efficiency and fine finish on machining surface. The spindle is fitted with a Ø5" 3 jaw hydradic hollow chuck.



18TOOLS HYDRAULIC TURRET

The machine is equipped with a 9-station hydraulic turret. Each station is equipped with two tools, and the loading capacity of the turret is 18 tools. Among which, six stations are fitted with O.D. / I.D. / facing tool holders, and the remaining three stations only can be fitted with I.D. sleeves.

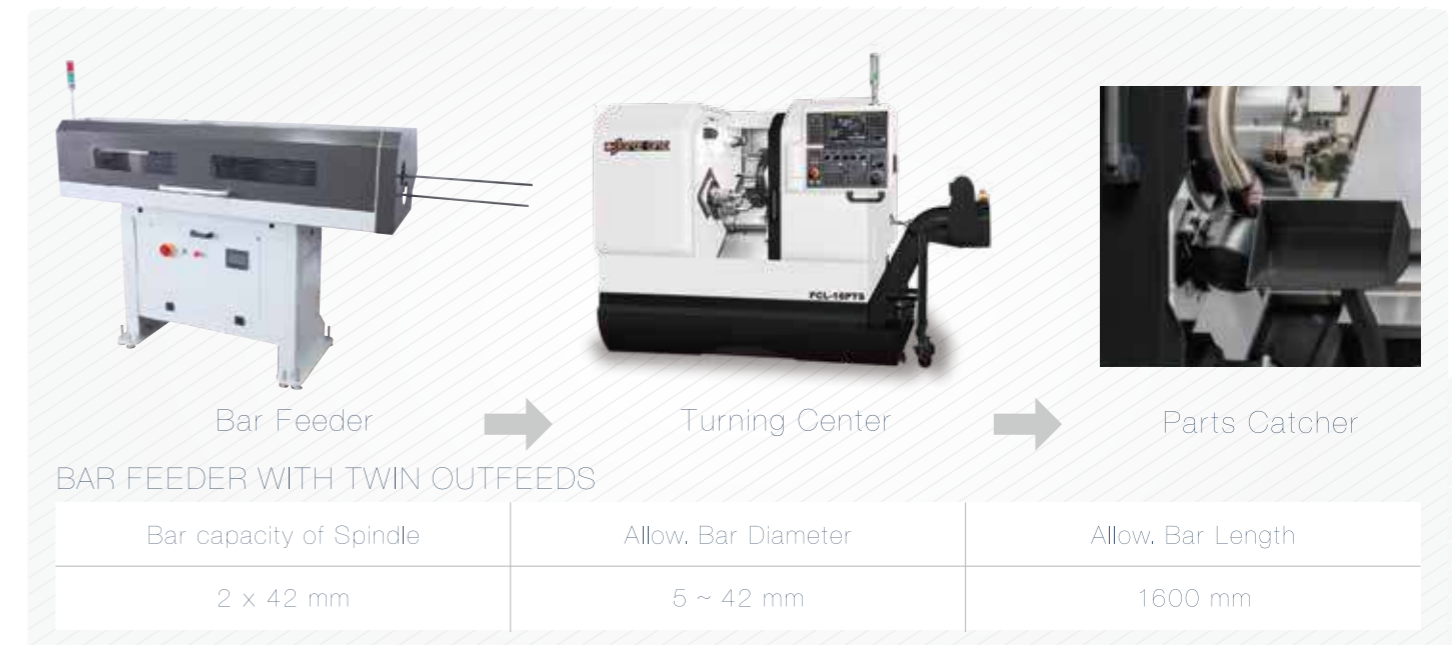
SPINDLE POWER / TORQUE DIAGRAM



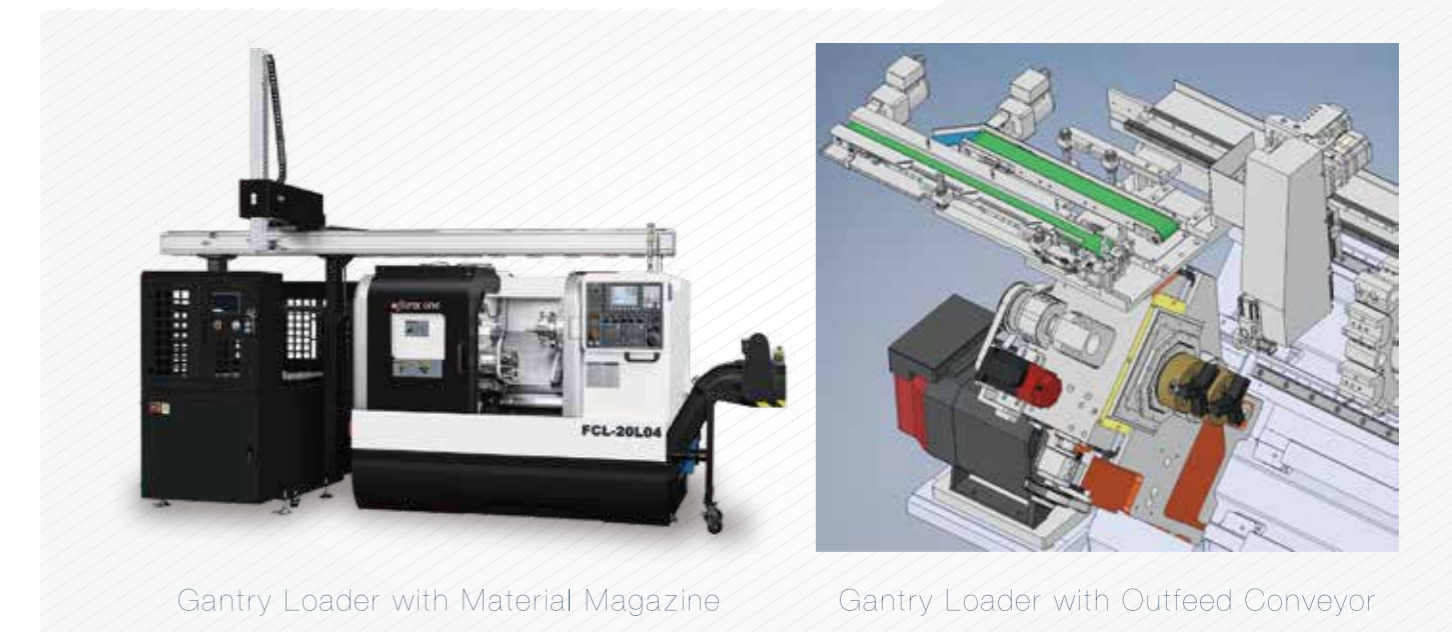
AUTOMATED PRODUCTION LINE (OPT.) TWO AXES BAR FEEDER

The production process of the automated production line is as follows:

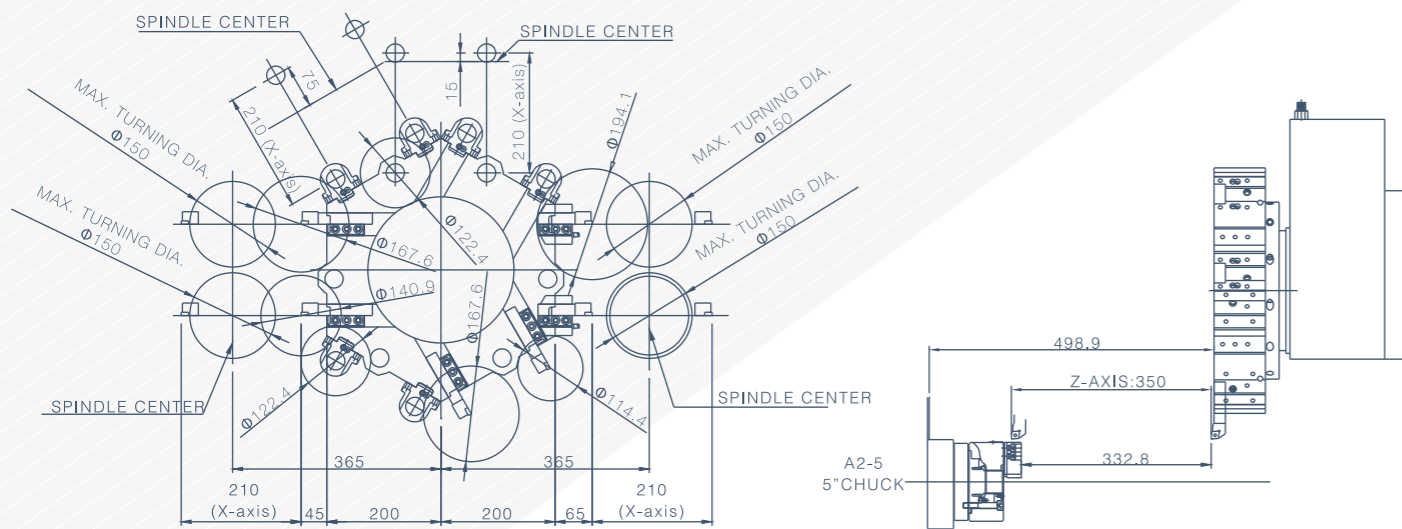
- The bar feeder with twin outfeeds delivers two bars into the parallel twin spindles of the turning center. After Machining, the parts catcher will deliver the finished parts to the parts stocker.
- This production line can achieve two times machining efficiency with the same area occupation, low equipment investment costs, and low energy consumption.



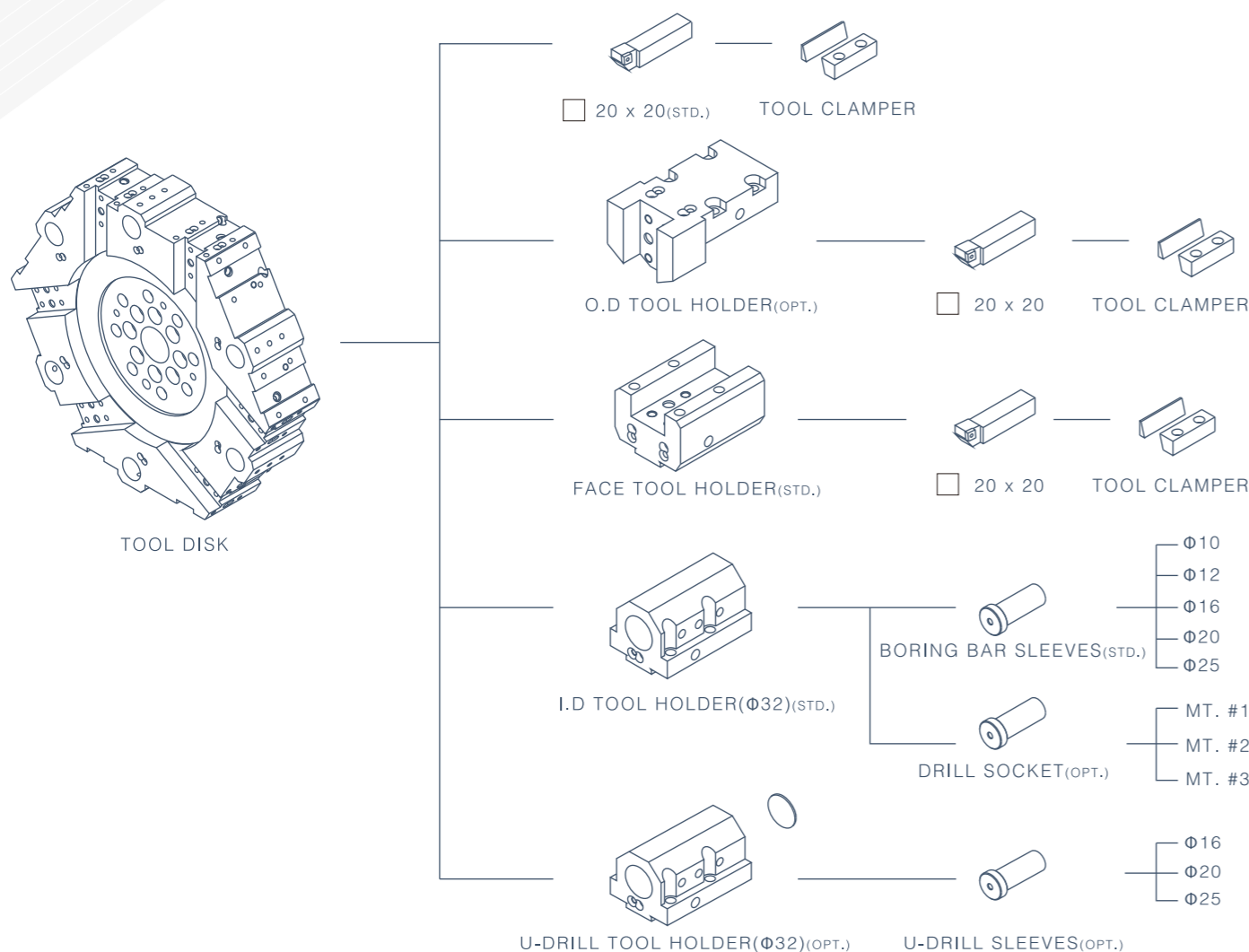
GANTRY LOADER WITH MATERIAL MAGAZINE



TOOL INTERFERENCE DIAGRAM



TOOL SYSTEM



SPECIFICATIONS

MODEL	ITEM	UNIT	FCL-16PTS
Capacity	No. of axis		4 axis(X/X1/Z/Z1)
	Swing over bed	mm(inch)	$\Phi 400$ mm (15.74")
	Swing over carriage	mm(inch)	$\Phi 220$ mm (8.66")
	Max. turning diameter	mm(inch)	$\Phi 150$ mm (5.9")
	Max. turning length	mm(inch)	330 mm (13")
Spindle (1/2)	Slideway type		Lineary guideway
	Spindle nose		A2-5
	Spindle bore	mm(inch)	$\Phi 51$ mm (2")
	Bar capacity	mm(inch)	Collet chuck: $\Phi 42$ mm (1.65) 3-jaw chuck: $\Phi 38$ mm (1.5)
Chuck	Spindle speed	rpm	6000 rpm
	Hydraulic chuck	mm(inch)	$\Phi 138$ mm (5.4")
Turret	No. of tools		9stations(9*2=18 tools)
	O.D. tooling	mm(inch)	20x20
	I.D. tooling	mm(inch)	$\Phi 32$ mm (1.25") P10
X/Z Axis	X axis travel	mm(inch)	210 mm (8.26")
	X1 axis travel	mm(inch)	± 2 mm (± 0.07 ")
	Z axis travel	mm(inch)	350 mm (13.77")
	Z1 axis travel	mm(inch)	± 5 mm (± 0.2 ")
	Rapid traverse rate (X axis)	m/min	30 m/min
	Rapid traverse rate (X1 axis)	m/min	9 m/min
	Rapid traverse rate (Z axis)	m/min	30 m/min
	Rapid traverse rate (Z1 axis)	m/min	9 m/min
	Cutting feed rate (X/Z axis)	mm/rev	0.001-500
	Dia. Of ballscrew (X axis)	mm(inch)	$\Phi 32$ mm (1.26") P10
	Dia. Of ballscrew (X1 axis)	mm(inch)	$\Phi 32$ mm (1.26") P5
	Dia. Of ballscrew (Z axis)	mm(inch)	$\Phi 36$ mm (1.42") P10
Dia. Of ballscrew (Z1 axis)	mm(inch)	$\Phi 32$ mm (1.26") P5	
Motor	Spindle	kW	β P22i (11/15 KW)
	X axis	kW	β 12Bis (1.8 kW)
	X1 axis	kW	β 4Bis (0.75 kW)
	Z axis	kW	β 12is (1.8 KW)
	Z1 axis	kW	β 4Bis (0.75 KW)
	Hydraulic pump	kW	1.5 KW (2 HP)
Tank capacity	Coolant pump	kW	750 W (1 HP)
	Hydraulic tank	Liter	40
Machine size	Coolant tank	Liter	115 Liter
	Length x width	mm(inch)	2440 x 1700 mm
	Height	mm(inch)	1837 mm (72.3")
	Weight (N.W./G.W.)	kgs	4500 kgs / 5050 kgs

- All specification, design and characteristics shown on this catalogue are subject to change without prior notice.

STANDARD ACCESSORIES

- 3 bar coolant pump
- Automatic lubrication system
- Tool box
- Working light
- Three color alarm light
- Right outlet chip conveyor and bucket
- Hydraulic unit
- Heat exchanger for electric cabinet

OPTIONAL ACCESSORIES

- 20bar coolant pump
- Air gun
- Oli skimmer
- Air conditioner for electric cabinet
- Coolant chiller
- Coolant gun
- Automatic POW off
- Air blow device
- Oli mist collector
- Gantry type parts loader with conveyor
- Parts catcher
- Gantry type parts loader with parts unloader
- Automatic door
- Robot interface
- Bar feeder
- Linear scale