Z-MaT®

CK62110 | FL300-MT | Q50 | STK50

Smart CNC Solutions

SPM SERIES

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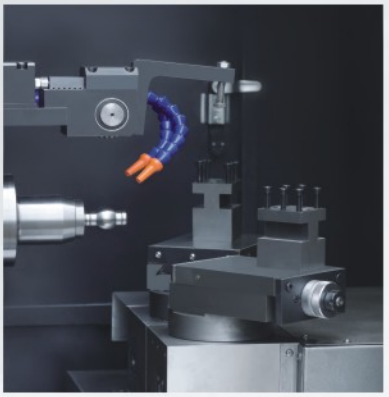
Special Purpose Machine



Increasing Productivity – Beyond Expectations

Because your efficiency and profitability are at the core of our mission, Z-MaT does not limit our engineering innovation to just general use CNC lathes and mills. We also design and produce special-purpose machines to meet specific needs that come to us from our diverse customer base.

SPHERICAL CUTTING CNC LATHE

The Q50 is a special design for machining ball-shaped parts. Turning, indexing and finish polishing can be accomplished in a single parts machining cycle.

Machine Description

Traditional spherical cutting CNC lathes used a traditional technology that featured a straight rack drive and hydraulic system. The result was that tolerances were difficult to maintain and surface finishes were not smooth.

The Q50 uses a circular rack and tooth combination, along with a servo motor to control table movement. The improved results include machining results that match programming specifications and mirror-fine finishes.

Machine Features

- Mono-Block single piece cast base and lathe bed. Extra-heavy casting is stabilized using traditional weather aging (an expensive and time consuming process). This helps to optimize lathe bed stability and accuracy.
- High precision, world-class linear motion bearing guideways increase machine accuracy and stability over the life of the machine.
- Center-mounted, high precision ball screw has optimal dynamic motion stability and efficiency.
- Accurate, high-speed cartridge spindle best fits the needs of the application – extra-fine finishes and optimal finish part roundness.
- Three axis simultaneous movement system maximizes felicity of parts accuracy to part design when cutting round or three dimensional shapes.

Specifications

Specifications	Unit	Q50
Chuck/Collet	N/A	Hydraulic collet
Max. spherical turning dia.	mm	Φ50
X/Z axis travel	mm	200/150
X/Z rapid traverse	m/min	9/9
Spindle nose	mm	A2-5
Spindle speed	rpm	4000
Main motor power	kW	3.0, *4.0
Turret type	N/A	Double turret & Hyd. hob
Overall dimension(LXWXH)	mm	1900X1210X1600
Weight(about)	kg	1900

A DIFFERENT SOLUTION

The Power A8L Lathe w/Rotary Table

Besides the Q50 spherical lathe, another option for accurately machining spherical shapes is our highly accurate Power A8L lathe matched with a precision rotary table with servo drive. See this setup on the photo below:

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Big Head – CK62110 CNC Lathe

The large swing radius on the CK62110 lathe provides an efficient option for turning rocker arms, or other long, narrow diameter parts.

Specifications

Gap-Bed Lathe	Unit	CK62110
Chuck	inch	Manual 10'', *12'', *15''
Max. swing dia. in the gap	mm	Φ1100
Max. swing dia. over bed	mm	Φ400
Max. length in the gap	mm	250
Max. length of workpiece	mm	400
Spindle bore	mm	Φ55, *Φ81, *Φ105
Spindle speed	rpm	1600, *800
Main motor power	kW	5.5, *7.5
X/Z axis travel	mm	320/400
X/Z rapid traverse	m/min	6/9
Turret type		4-station toolpost
Guideway type		Hard
Overall dimension(LXWXH)	mm	2100X1350X1800
Weight(about)	kg	2300

Note:"*" means optional.

Multi-tool FL300-MT

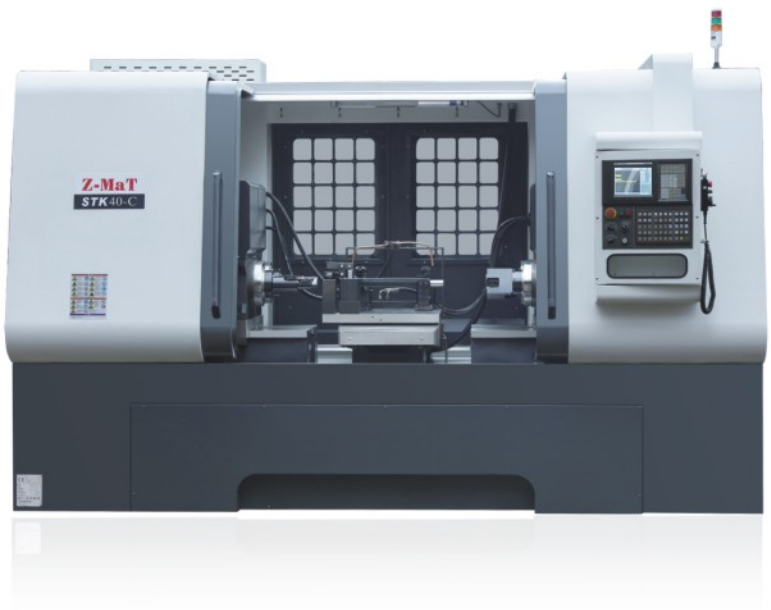
Specifications

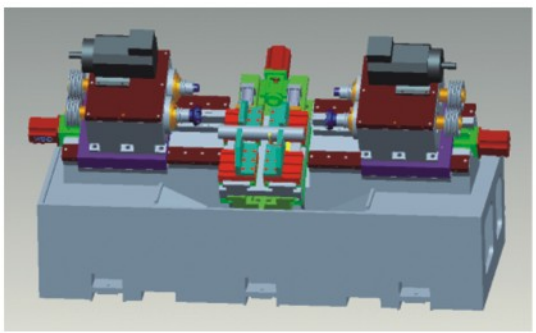
		Unit	FL300-MT	
Capacity	Chuck/collet	type	Hydraulic collet	
	Bed type/ guideway		Flat/LM	
	Max. swing dia. over bed	mm	Φ300	
	Max. length of workpiece	mm	300	
	Max. swing dia. over slide	mm	Φ135	
Spindle	Spindle bore	mm	Φ48	*Φ55
	Max. dia. of through hole	mm	Φ40	*Φ46
	Spindle nose		A2-5	*A2-5
	Spindle speed	rpm	3000 *4500	*2500 *4500 *5000
	Spindle motor power	kW	3.7/5.5, *5.5/7.5	
Axis	X/Z travel	mm	350/300	
	X/Z rapid traverse	mm/min	25/25	
Toolpost	Type		Gang type *4-station toolpost	
	No. of tool stations	No.	4-10	
Sub-tools	X2/Z2 travel	mm	60/90	
	X2/Z2 rapid traverse	m/min	15	
	Toolpost type		Gang type	
	No. of sub tools	nos	2	
	Sub-tool distance	mm	55mm	
Others	Power capacity	kVA	9	
	Dimensions (LxWxH)	mm	1700x1200x1550	
	Weight(about)	kg	1800	

Note: "*" means optional, "N/A" means not available,
"LM" means linear motion guide way.

Dual End Milling And Drilling Machine STK Series

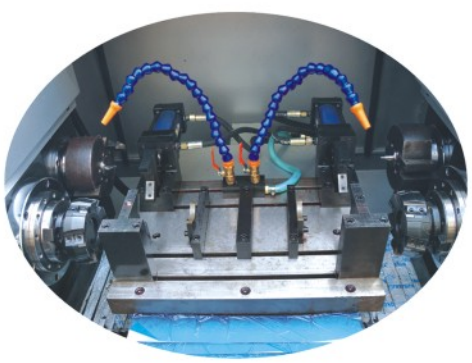
The dual end turning machine was developed specifically for the auto industry, and can be applied to other applications. This machine allows for double end cutting of parts that require machining on multiple surfaces of the part. Configurations of two to eight spindles can be configured for differing part turning requirements.





Specifications

		Unit	STK50
Capacity	Machining Dia. Range	mm	Φ20-70
	Machining length Range	mm	200-700
	Size of Centering	mm	Φ2.5-6.3
	Max Milling Depth.(one Side)	mm	5
Spindle	Speed Spindle	m/min	200-2000
	Spindle Motor	kW	5.5/7.5x2
	Spindle Nose	Type	BT50
	Turning Tool		Special Toolholder
	Center Collet		Milling Collet
Axis	X/Y/Z travel	mm	250/280/280
	X/Y/Z rapid traverse	mm/min	10
Clamping	Structure		Double V support self-positioning
	Driven		Hydraulic
	Clamping force	kN	15
Others	Bed degree	mm	30°
	Machine weight (about)	kg	3500



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