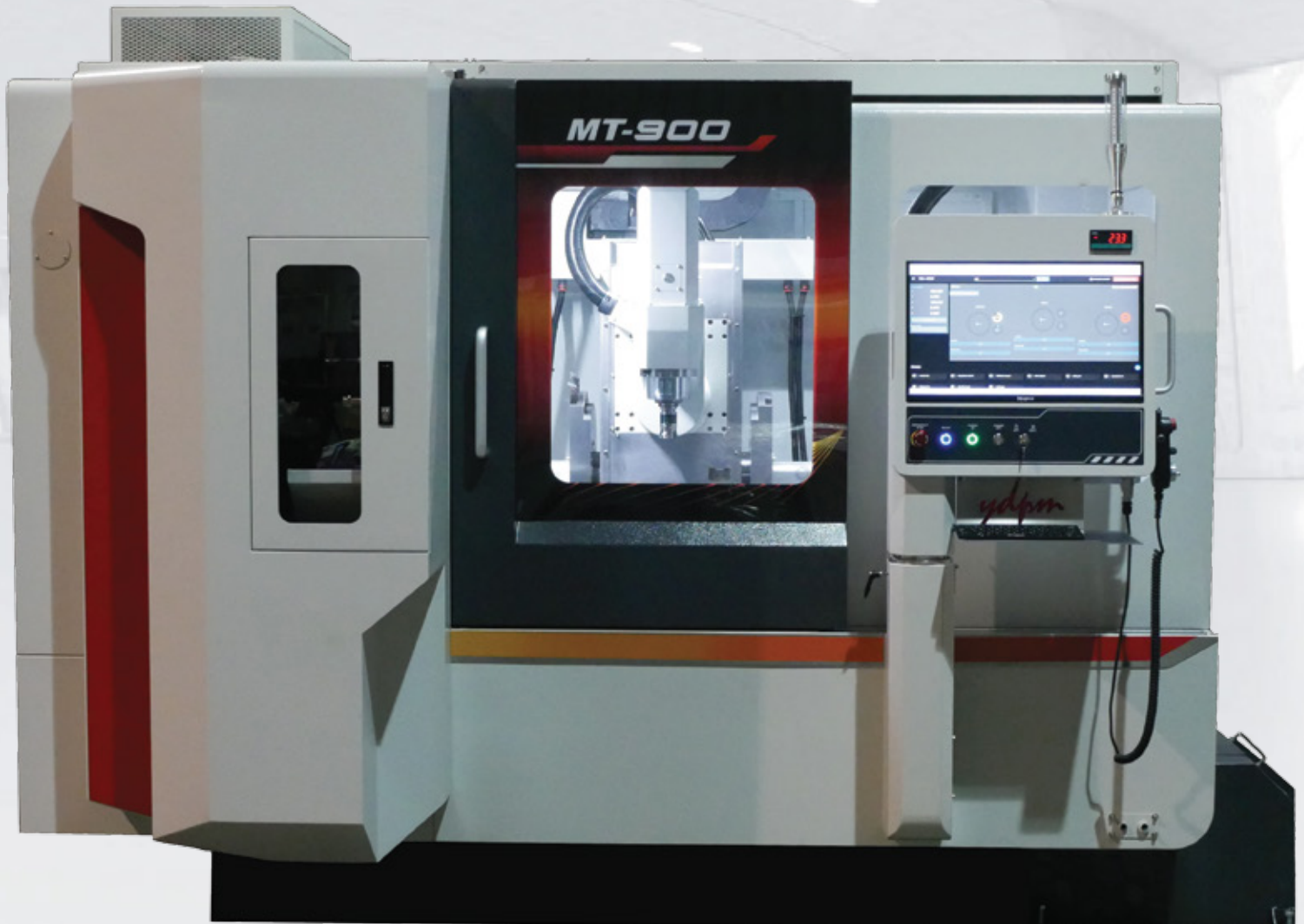


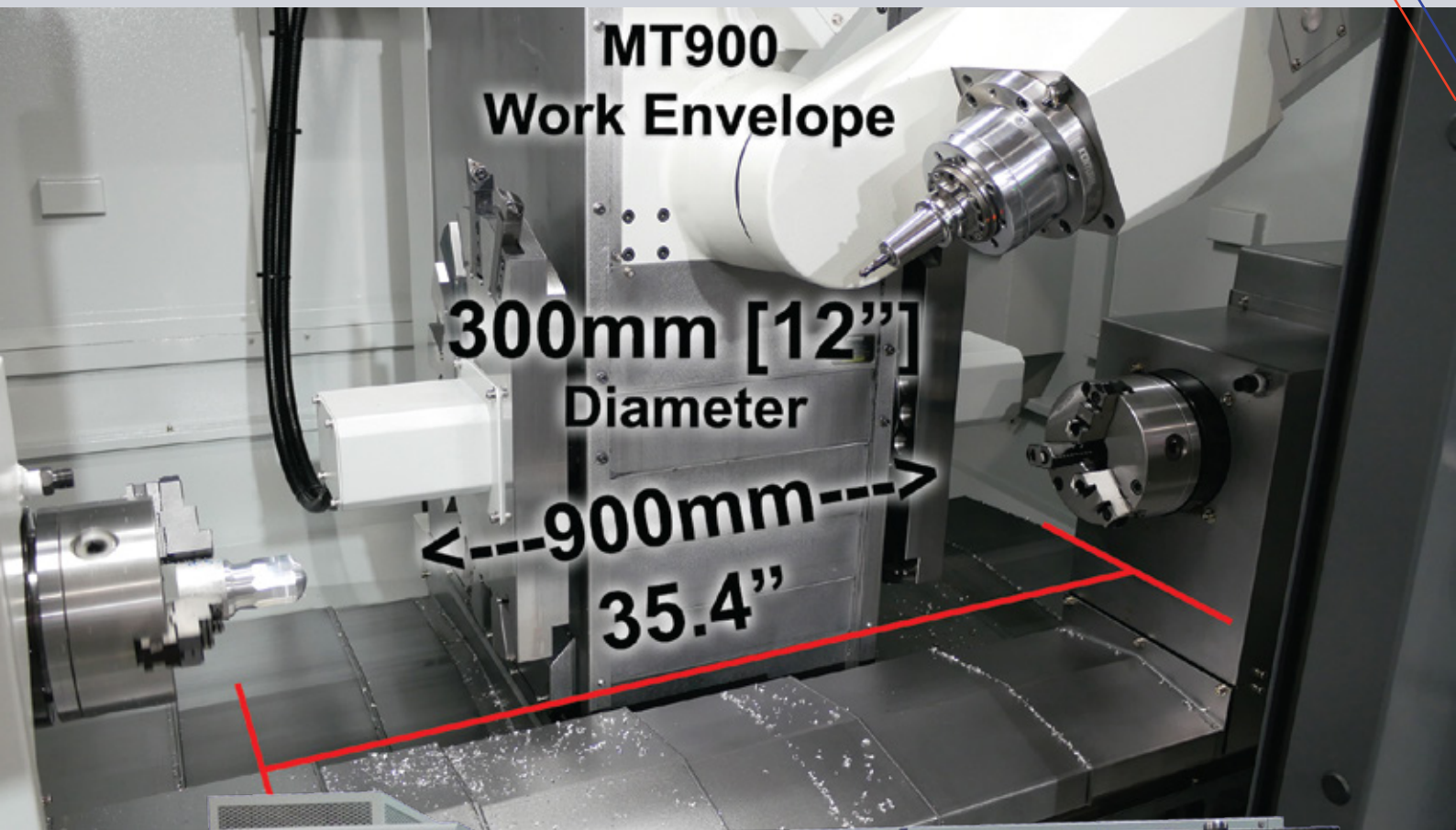
SwissMak

MT-900

5-Axis CNC Mill-Turn Machining Center



Need to make big parts? No problem



Fast, Powerful, Rigid B-Axis Milling Head

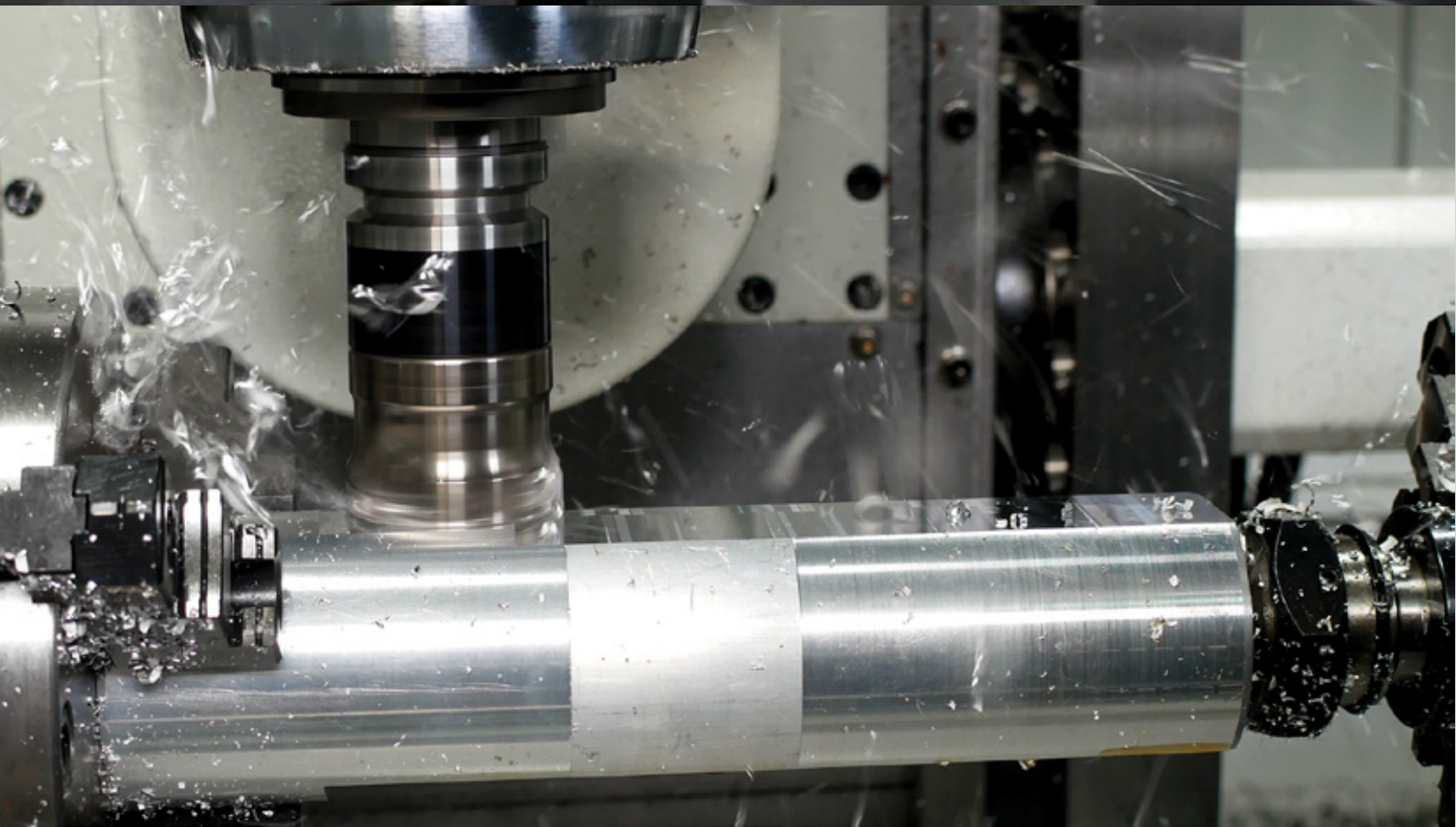


**MT900
Milling
Spindle**

A close-up photograph of the MT900 Milling Spindle. The spindle is a complex, multi-tiered metal assembly with a polished finish. It is mounted on a white, cylindrical motor housing. The spindle itself is long and tapers towards the end, where a small, sharp cutting tool is visible. The background is a blurred industrial setting.

BBT30
Dual Contact
24,000 RPM

10 kilowatts
Continuous Power Output



2 Workholding Spindles 2 Turning Tool Turrets



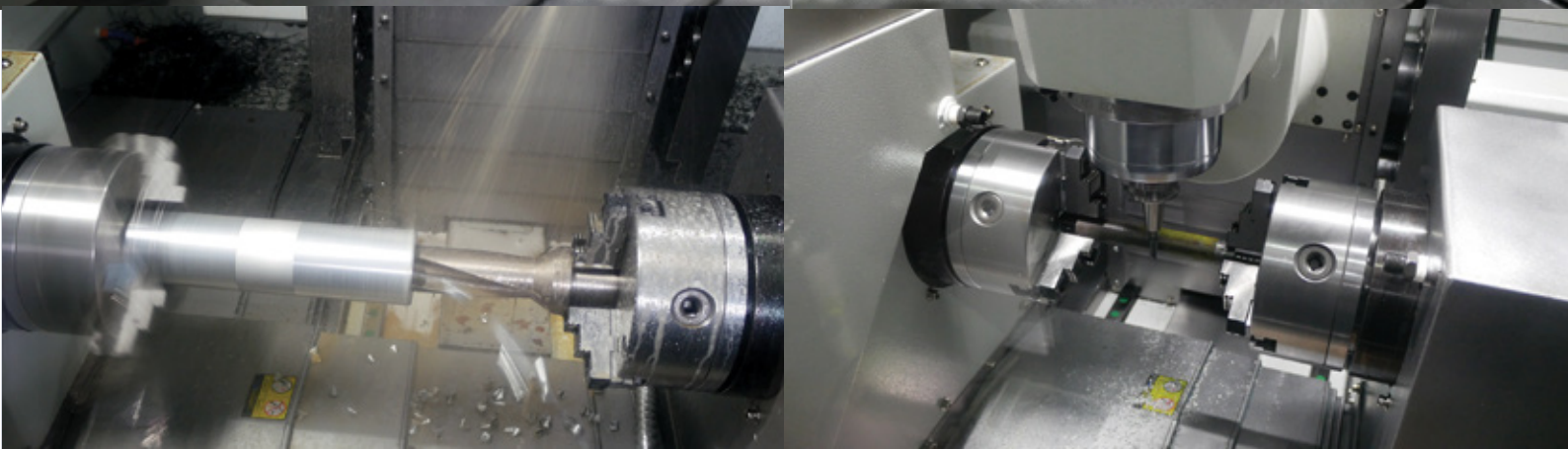
**MT900
Headstock
Spindle**

**A2-5 Standard
6 inch / 160mm
3,000 RPM
[7.5/18.8]kw [10/25]hp
Continuous/Peak Power
45mm / 1.77" Bore**



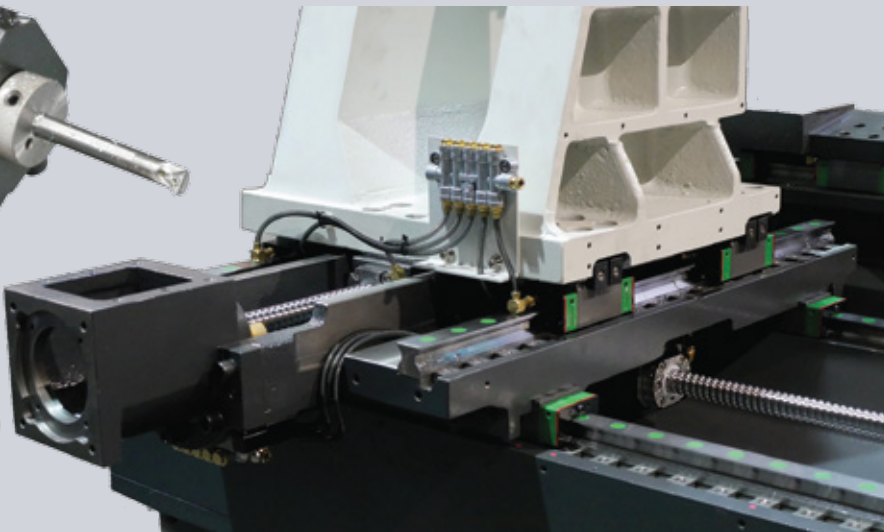
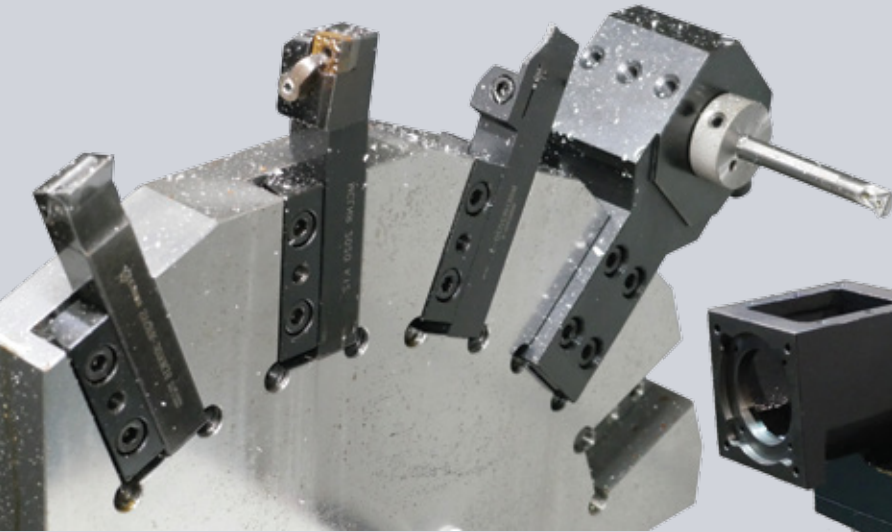
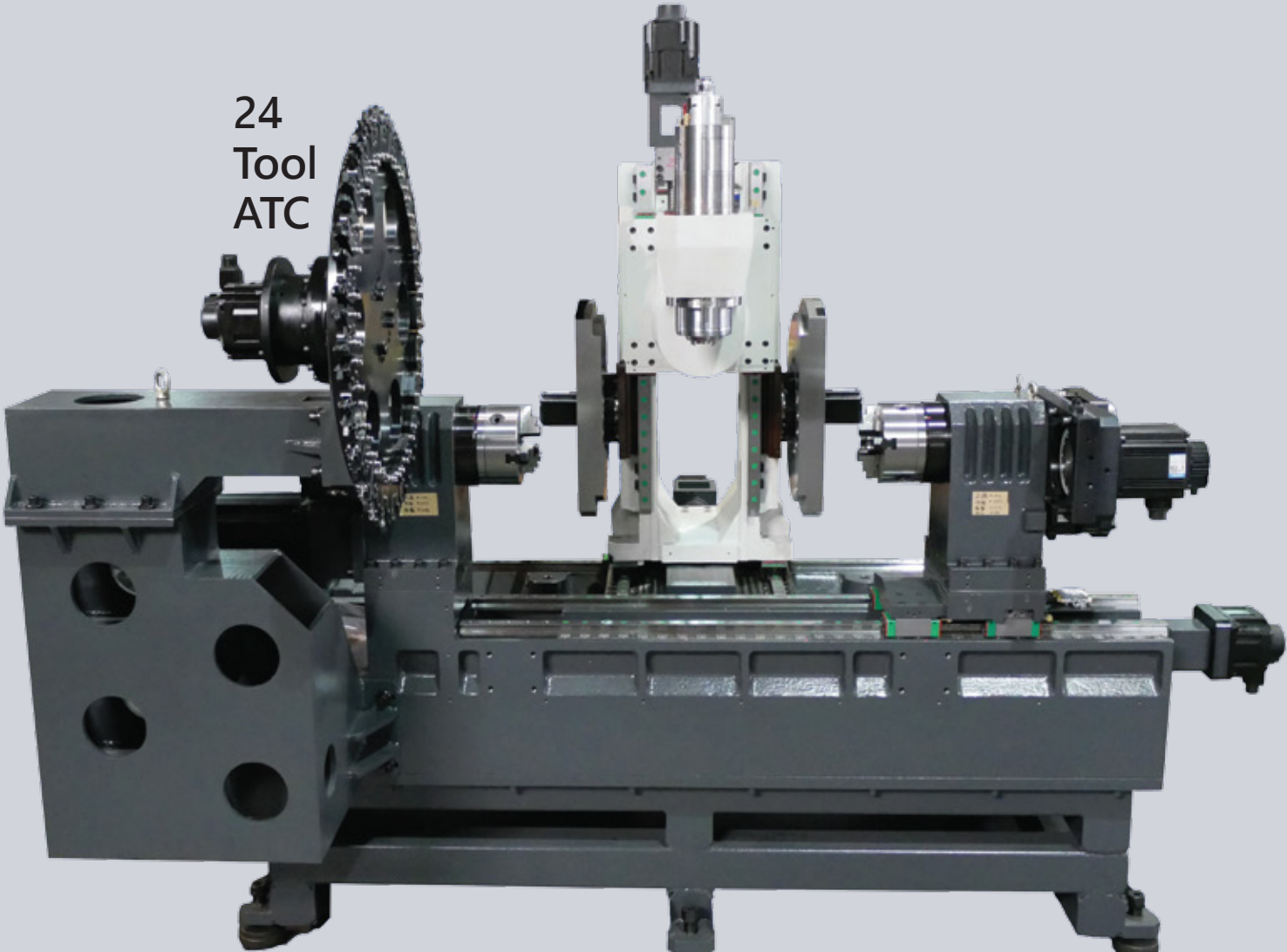
**-Standard Option-
Hydraulic Chucks**

for Automation



Rigid Flat Bed Machine Construction

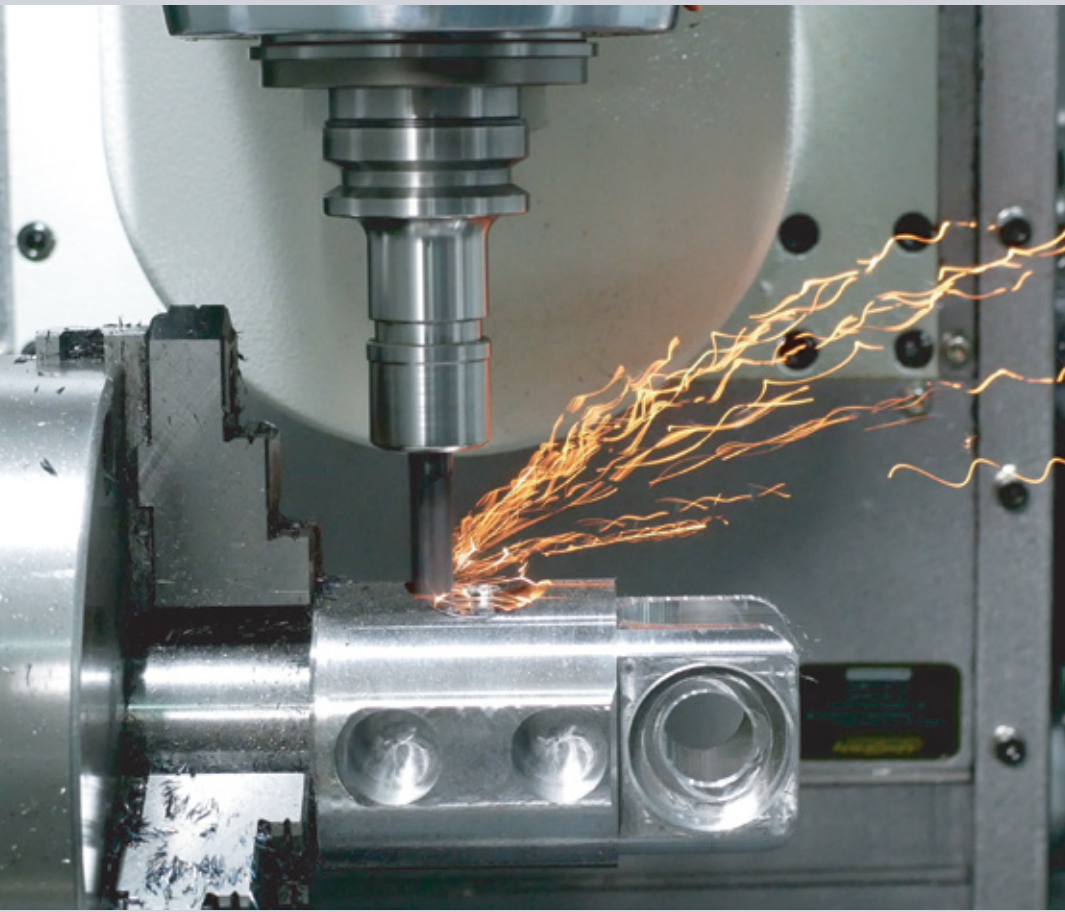
24
Tool
ATC



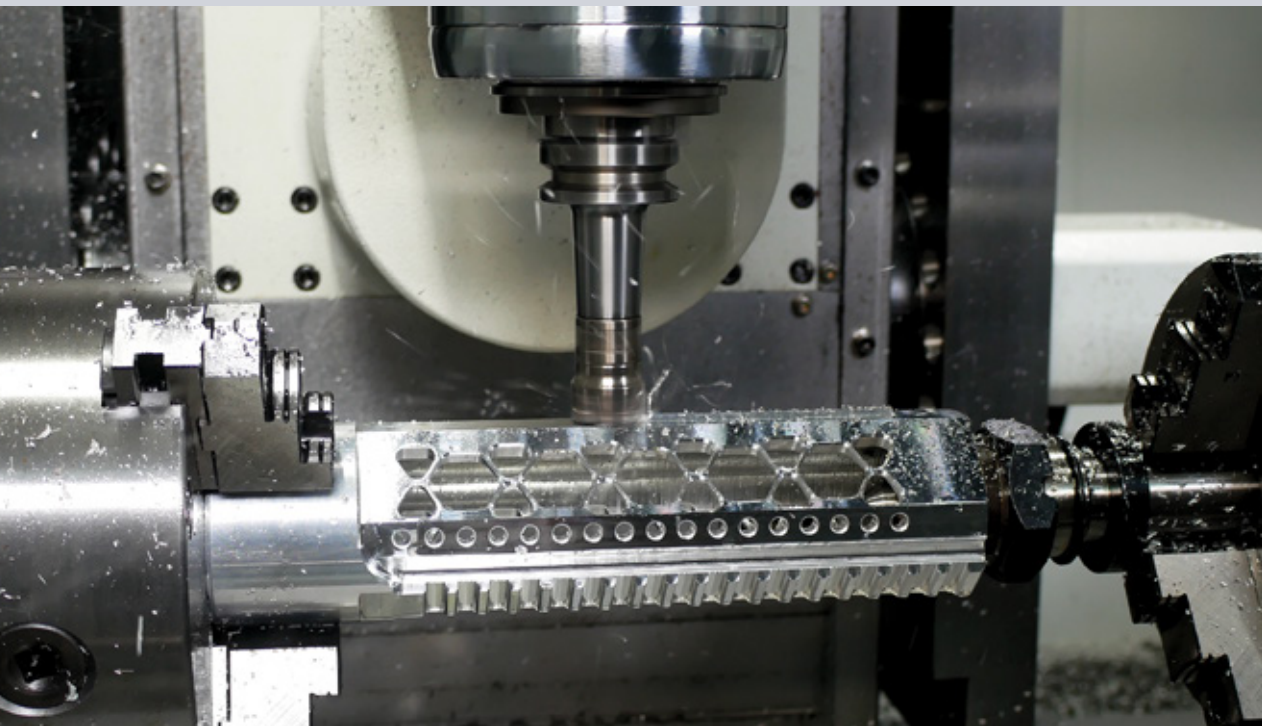
Double D-Shape Turrets with 11 tool stations each

Roller Type Ways on all 4 Linear Axes

Example work pieces

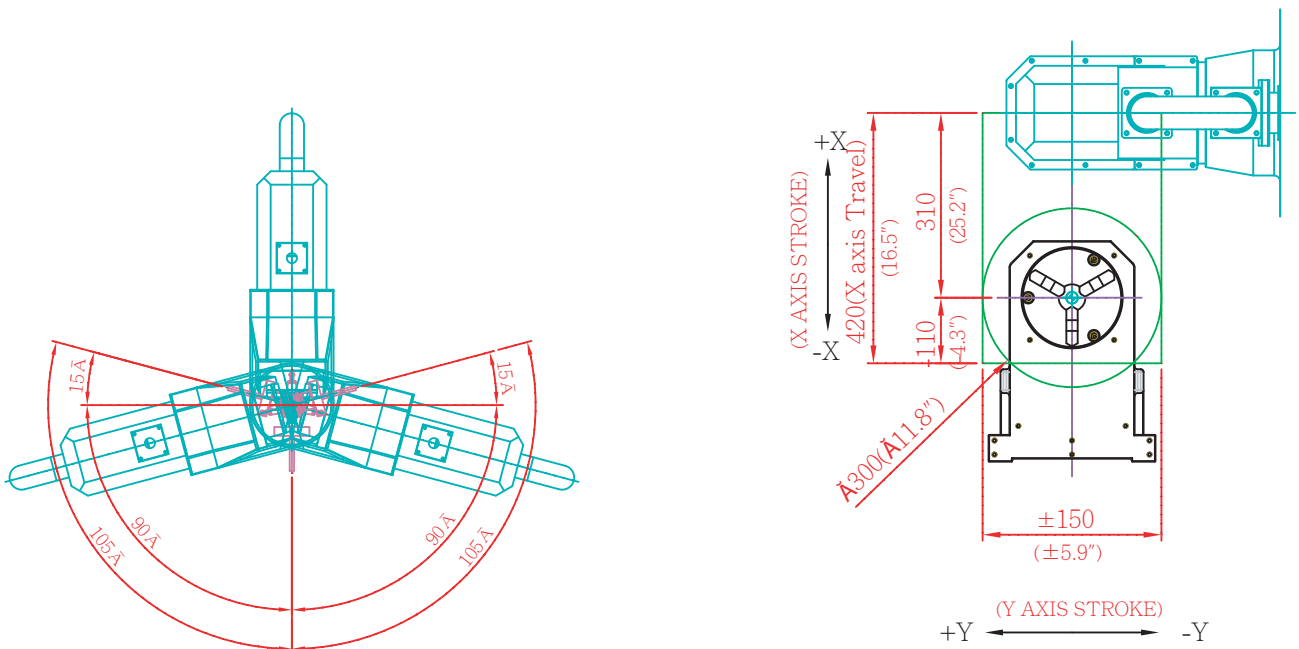
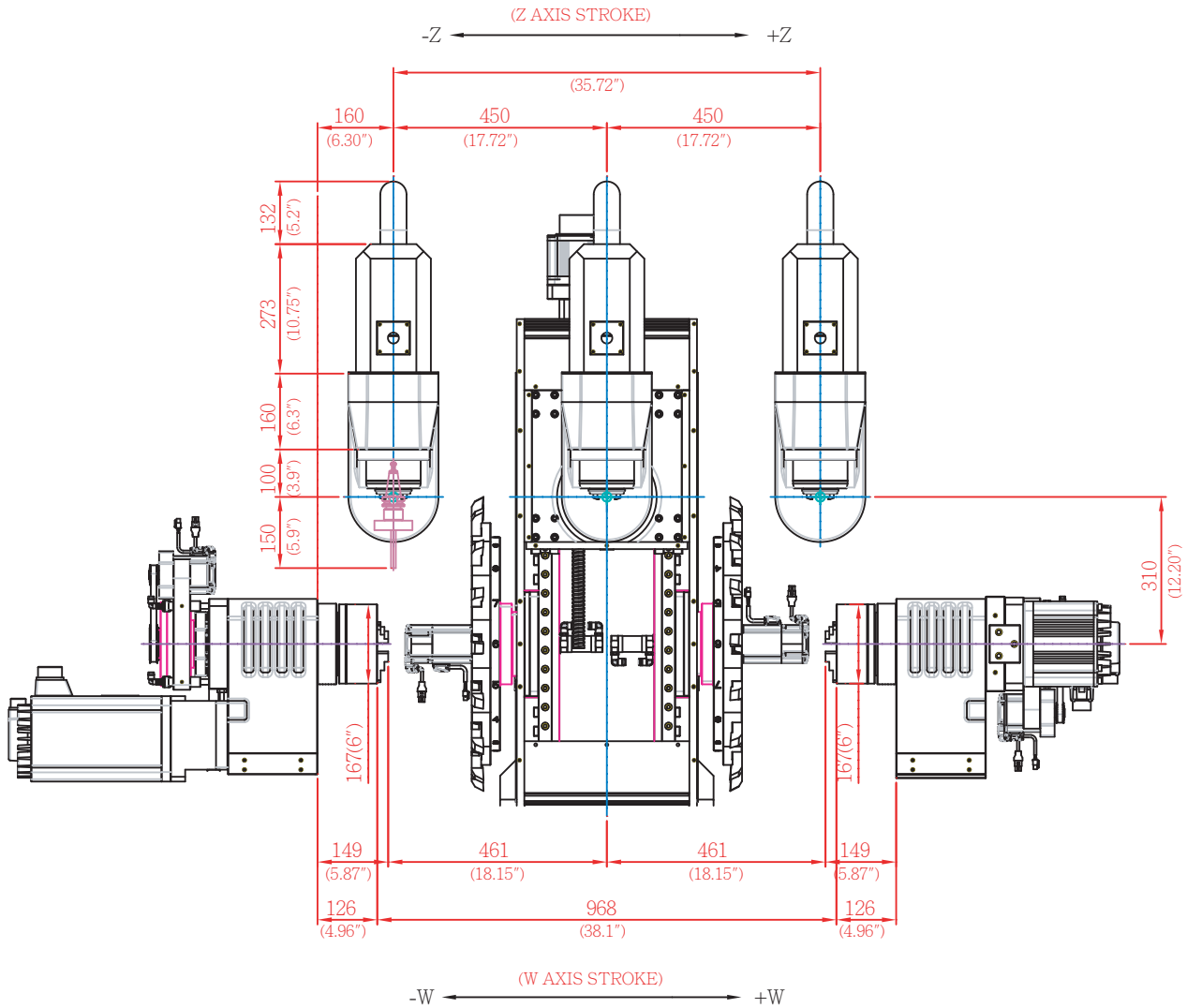


Steel Gimbal Joint

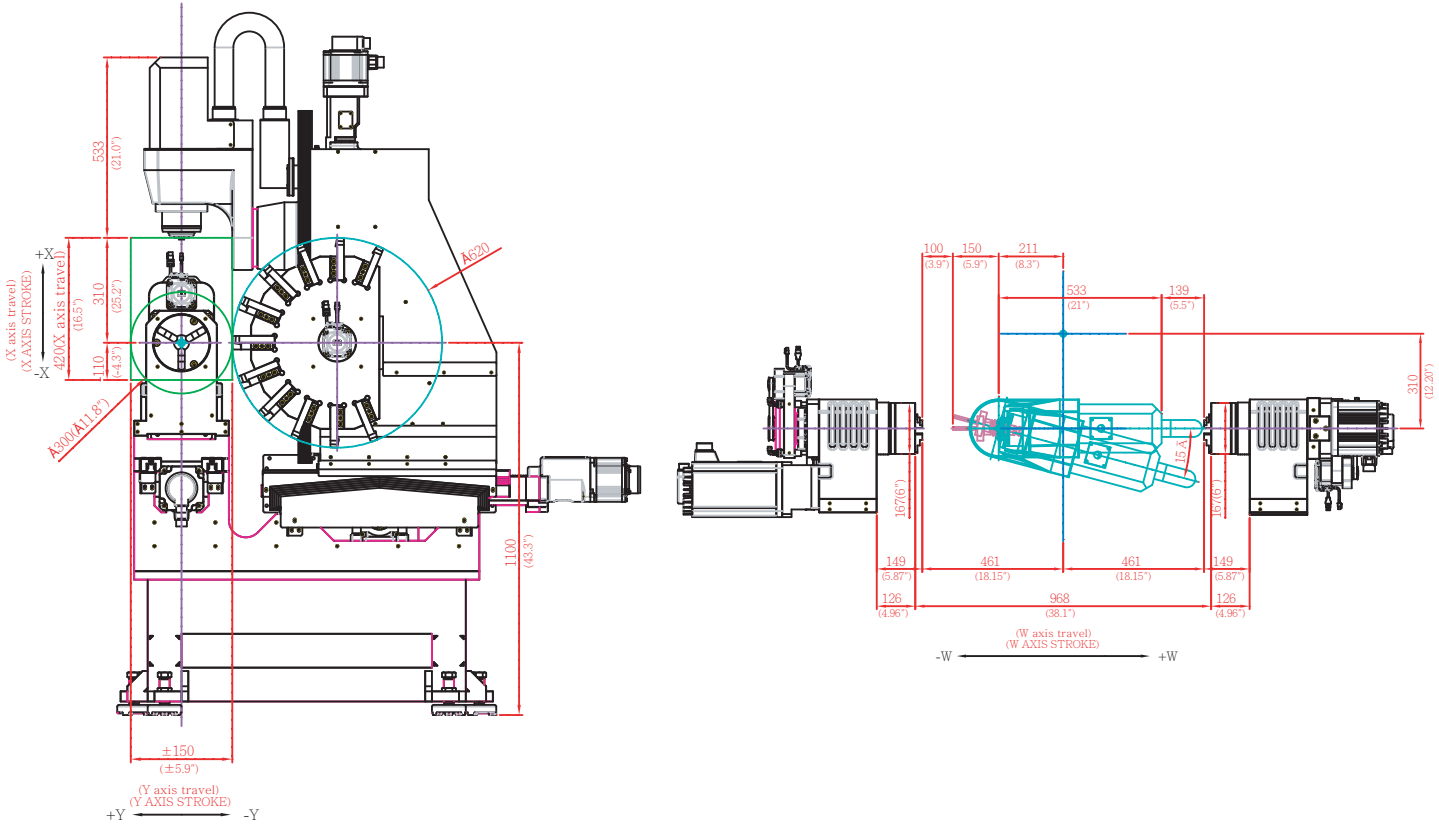
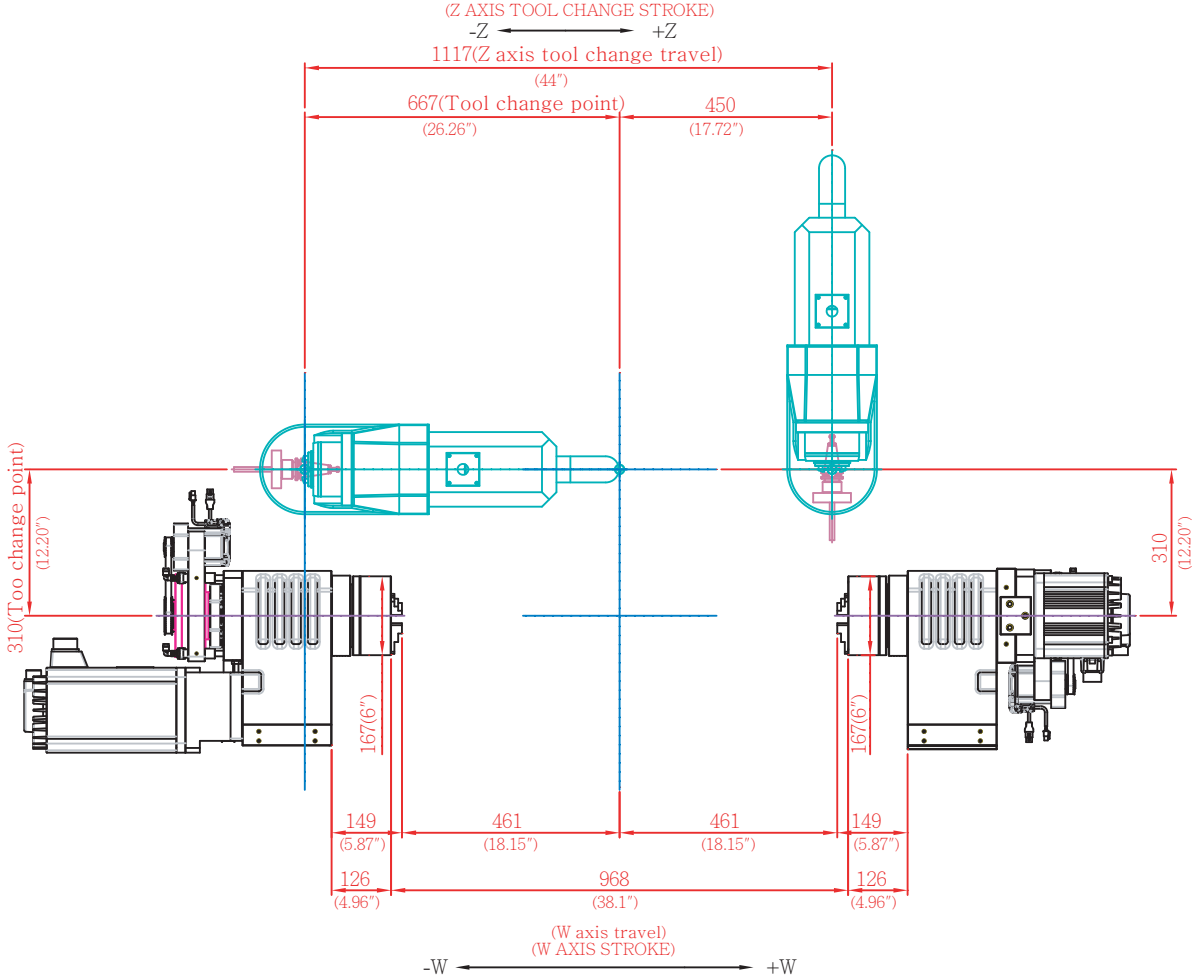


Handguard w/ Picatinny Rails

MT900 Work Envelope



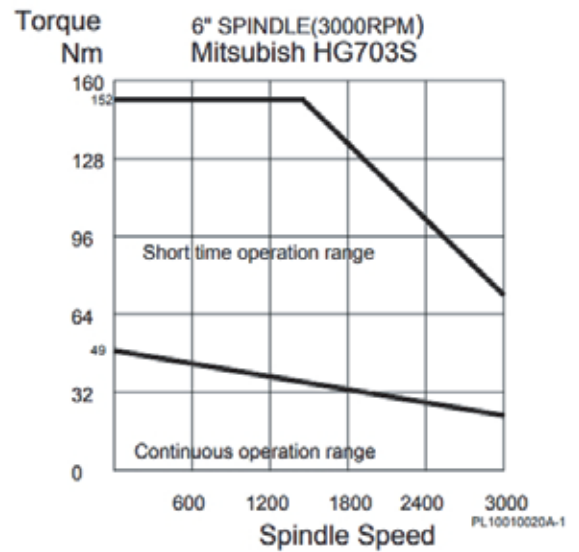
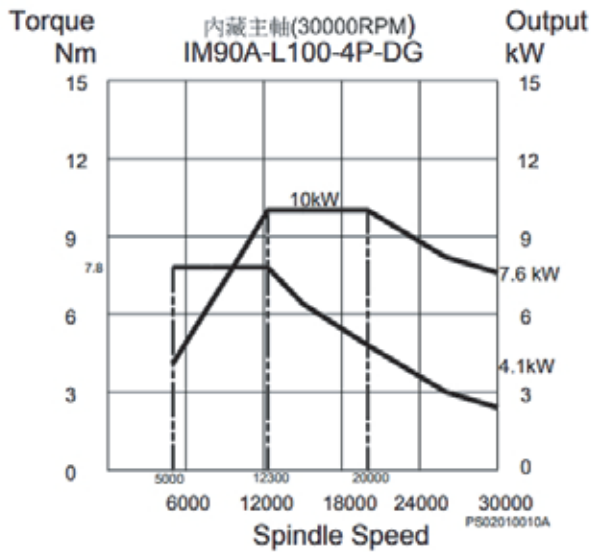
MT900 Work Envelope



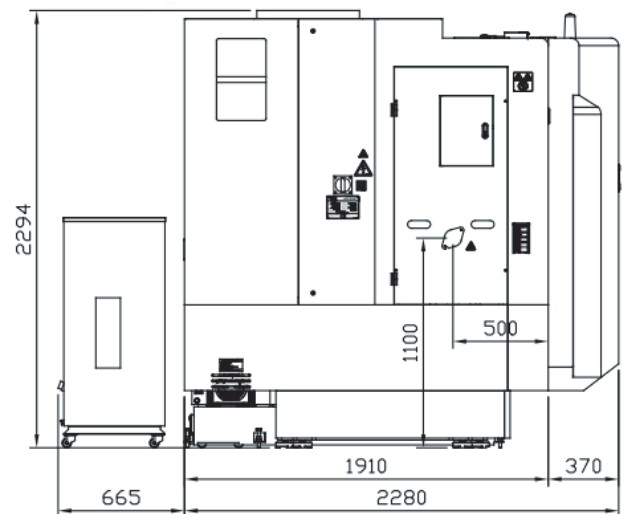
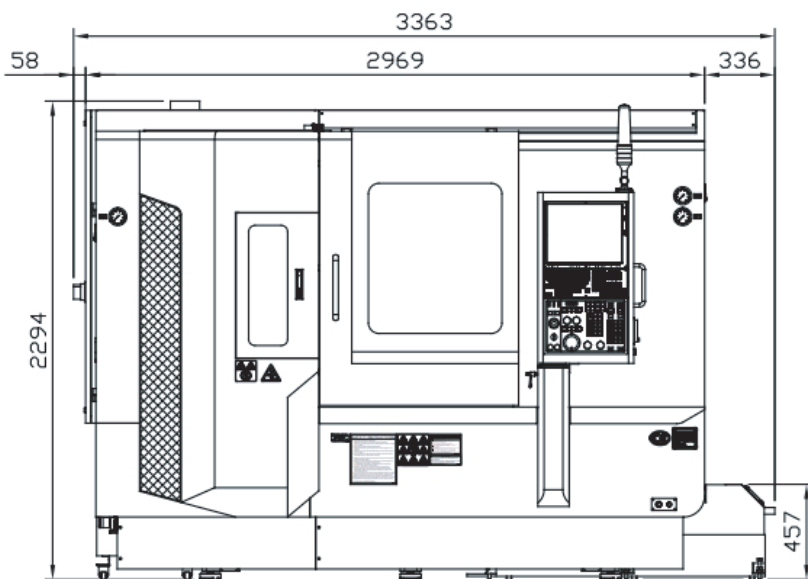
Spindle Power and Torque Graphs

Milling Spindle

Headstock Spindle



Machine Dimensions



MT-900 Control Choices

Optional Controls

- SwissMak Duet 3 (PC Based) (5-Axis)
- Mitsubishi M830, 15" LCD (4+1)
- FANUC 0iM (4+1)
- FANUC 31i (4+1)
- HEIDENHAIN TNC640 HSCI (5-Axis)
- SIEMENS SINUMERIC 828D (4+1)
- SIEMENS SINUMERIC ONE (5-Axis)

Duet PC Control



Mitsubishi M830 Control



FANUC 0iM Control



HEIDENHAIN TNC640 HSCI Control



SIEMENS 828D Control



- 4-axes simultaneous control
- Linear interpolation
- Circular interpolation
- Helical interpolation
- Exact stop G09
- Skip function G31
- Automatic acceleration / deceleration
- Plane select G17, G18, G19
- Polar coordinate command G15 / G16
- Workpiece coordinate system G52~G59
- Scaling G50 / G51
- Automatic override for inner corners G62
- Coordinate system rotation G68 / G69
- Rigid tapping M29
- Program data input G10
- Canned cycles for drilling
- Tool function
- Tool length compensation
- Tool offset memory 400 pieces
- Art program storage length: 512K (0iM)
- Number of registerable program: 400 (0iM)
- Background editing
- Manual guide 0i
- 0iM color 10.4" LCD
- USB interface

- Contouring control for machines with up to 18-axes and controlled spindle
- HEIDENHAIN inverter systems and motors recommended
- Uniformly digital with HSCI interface
- TFT color flat-panel display, 15-inch
- Storage medium: SSDR solid state disk with 32 GB
- Programming in HEIDENHAIN conversational format, with according to DIN / ISO
- Standard milling, drilling and boring cycles
- Touch probe cycles
- FK free contour programming
- Special functions for fast 3-D machining
- Short block processing time (0.5ms)
- Automatic calculation of cutting data
- Pallet management

- LCD color
- Linear interpolation
- Circular interpolation
- Helical interpolation
- Skip function
- Plane select
- Workpiece coordinate system
- Coordinate system rotation
- Rigid tapping
- Mirror image, scaling, rotation
- Canned cycles for drilling / milling
- Tool function
- Tool length / radius compensation
- Part program storage length: 3MB
- Background editing

Specifications

MT-900

Capacity	Max. swing over Boxways	504(20)	mm(in)
	Distance between faceplates	1070(42)	mm(in)
	Max. Turning Diameter	300(12)	mm(in)
	Uninterrupted turning length	910(36)	mm(in)
	Through Spindle Bar capacity	46(1.81")	mm(in)
	Workpiece Weight (between centers)	200(440)	Kg(lbs)
Travel	Cross Milling travel	300(12)	mm(in)
	Vertical Milling travel	420(16.5)	mm(in)
	Headstock travel	N/A (Fixed)	mm(in)
	Tailstock Spindle travel	968(38.1)	mm(in)
	Tool Turret travel	1117(44)	mm(in)
Headstock Spindle Tailstock spindle	Turning Spindle Speed	0-3000	rpm
	Chuck size	160(6")	mm(in)
	Type of spindle nose	DIN/JIS	
	Through Chuck diameter	45(1.77")	mm(in)
	Front bearing ID/OD	70/110(2.4/4.4)	mm(in)
	Rear bearing ID/OD	65/100(2.4/4)	mm(in)
	Spindle power max.	20(27)	KW(HP)
	Spindle power continuous	7.5(10)	KW(HP)
	Max. spindle torque	120(88.5)	N-m(ft*lb)
	Spindle Base Speed	1500	rpm
	Spindle Positioning Resolution	0.2(12)	Deg(ArcMin)
Milling Head	Milling Spindle Speed	0-24000	rpm
	Spindle Taper	BBT30 (Dual)	
	B Axis Harmonic Backlash	6	ArcSec
	B Axis Rapid Traverse	20	rpm
	Spindle power max.	10(13.5)	KW(HP)
	Spindle power continuous	10(13.5)	KW(HP)
	Max. spindle torque	7.8(5.8)	N-m(ft*lb)
	Maximum Power Range	15000-20000	rpm
	ATC Tool Capacity	24	BBT-30
A/C Axis Rotary Gearbox	Spindle Low Gear Speed	15	rpm
	Max. spindle torque	400(300)	N-m(ft*lb)
	Continuous torque	100(75)	N-m(ft*lb)
	Backlash	6	ArcSec
	Repeatability at Chuck OD	0.005(0.0002)	mm(in)
	Torsional Rigidity	~35	Nm/ArcMin
	Gear Ratio	100:1	
	Motor Belt Type	8YU	5GT
	Harmonic Gear Bore	46(1.81)	mm(in)
Homing Repeatability	4	ArcSec	
Turret	Number of Turret tools	11	Stick/Axial
	Turret indexing time (one tool)	1.3	sec
Feedrate	All Linear axes rapid traverse	30	M/min

Note : All content is for reference only and may be subject to change without notice or obligation.

STANDARD ACCESSORIES

Mitsubishi M80A, 15" LCD

- A2-5 spindle 3,000rpm (Main & Sub spindles)
- 6"3-jaw hydraulic chuck (Main & Sub spindles)
- Soft jaws *1 set / Hard jaws * 2sets
- Harmonic gears for C axis * 2 sets
- Boring bar holder * 3 pcs
- Turning holde * 3 pcs
- Wedge type tool clamping * 16 pcs
- Boring bar bushings (Ø8, 10,12,16, 20,25) x φ32 *2 sets
- Taper sleeve MT no. 1, 2 x φ32 *2 sets
- BBT30 milling spindle (built-in) speed: 24,000rpm
- Auto tool changer 24 tools
- Fully enclosed splash guard
- Air blow for chuck + air unit
- Foot pedal for chuck
- Automatic lubrication system
- Work lamp + End of program indicator (3-color)
- Coolant system + chip tray
- Leveling bolts and pads
- 1 year machine parts warranty (Ex-Work)
- 2 year Mitsubishi controller warranty
- Transformer 30KVA (380/3PH/50HZ)
- Tool Kit



OPTIONAL ACCESSORIES

- Heidenhain angle encoder for c axis
- Oil skimmer
- Oil & moist collector
- Coolant gun
- Bar feeder
- Interface for bar feeder
- Parts catcher
- Chain type chip conveyor + cart
- Air conditioner for electrical cabinet
- Tool setter
- Workpiece measurement
- Transformer
- Stabilizer
- CE certificate

