



Hybrid 20mm 8-Axis CNC Swiss Machine

- + Double "Y" Axis and Double "C" Axis
- + Simultaneous Main & Sub-Spindle Machining
- + 30-Tools with 8-Driven Tools Standard
- + Removable Rotary Synchronous Guide-Bushing
- + Cutting Oil Chiller for Consistent Thermal Stability
- + High-Performance Mitsubishi M-830 Control



Main Spindle

Maximum RPM/Spindle Bearing	10,000 RPM / 5-Bearing Spindle, 3-Front, 2-Rear Ball Bearings
Main Spindle Servo Moto (2.2/3.7Kw)	5-Horsepower 15-minute Duty-Rated (3-HP Constant Duty-Rated)
Collet Style for Main & Subspindle	Hardinge TF-25S / Southwick & Meister TS-25 / Star SR-20
Collet Actuation System	Pneumatic Piston-Driven Toggle Clamp Feed-Finger Style
Synchronous Rotary Guide-Bushing	TD25S (20mm Round, 16mm Hex, 12mm Square)
Maximum Barstock Diameter	20mm (Collet Range - 1/16" - 13/16" / 0.0200" - 0.813")
Maximum Distance Between Spindles	23.6" (600mm)
Spindle Centerline Height	42" (1060mm)

Main Spindle Tooling

O.D. Turning Tool Holders – S1	6 - 12mm Square Shank Turning Tool Holders
I.D. Internal Tool Holders – S1	4 - 22mm Shank Round Tool Sleeve Bores
I.D. Deep Hole Drill Positions – S1	2 - 22mm Shank Round Tool Sleeve Bores
Cross Slide Live Tools – S1	5 - ER-16 Cross Slide Live Tools, 8,000 rpm, 1.6 HP (1.2kw)
Axial Front Slide Live Tool Option – S1	3 - ER-16 Front Slide Live Tools - Optional in lieu of 1 Cross Tool
Maximum Drilling / Tapping Capacity	10mm Drilling Capacity / M8 Tap - Main Spindle
Cross Drilling / Tapping Capacity	8mm Drilling Capacity / M6 Tap - Driven Cross Tools

Sub-Spindle

Sub-Spindle RPM / Spindle Bearing	8,000 RPM / 4-Bearing - Quad-Duplex Pair Configuration
Sub-Spindle Servo Moto (2.2/3.7Kw)	5-Horsepower 15-Minute Duty-Rated (3-HP Constant Duty-Rated)
Collet Style for Main & Sub-Spindle	Hardinge TF-25S / Southwick & Meister TS-25 / Star-SR20
Collet Actuation System	Pneumatic Piston-Driven Toggle Clamp Feed-Finger Style
Maximum Barstock Diameter	23mm (Collet Range - 1/16" - 13/16" / 0.0200" - 0.813")
Finished Parts Ejector & Air Blast	Included (Can Pass Long 20mm Parts Through the Subspindle)
Maximum Workpiece Length for Front Ejection	110mm Maximum Part Length for Front Ejection from Subspindle

Sub-Spindle Tooling

O.D. Turning Tool Holders – S2	3 - 10mm Square Shank Turning Tool Holders
I.D. Internal Tool Holders – S2	4 - 22mm Shank Round Tool Sleeve Bores
I.D. Internal Tool Holders – S2 (8 possible)	3 - ER-16 Fixed Tools – Ø3/8" Max.
Sub-Spindle Axial Live Tools – S2 (8 possible)	3 - ER-16 Axial Live Tools, 4,000 rpm, 1.0 HP (0.75kw)
Backworking Machining Length	6.1" Maximum Turning Length / 3.14" Maximum Boring Length
Maximum Drilling / Tapping Capacity	10mm Drilling Capacity / M8 Tap - Sub-Spindle
Maximum Cross Drilling / Tapping Capacity	8mm Drilling Capacity / M6 Tap - Driven Cross Tools

Axis

Main Spindle Stroke	9.840" Single Stroke (250mm)
Maximum Turning Length – Rotary Bushing	7.48" (190mm)
Maximum Turning Length – Without Bushing	2.36" (60mm)
X1, Y1, Z1, X2, Y2, Z2 Rapid Traverse Rate	944 IPM (24m/minute)
X1, Y1, Z1 Axis Motor Power	1-Horsepower (.75kw)
X2, Y2, Z2 Axis Motor Power	.67-Horsepower (.5kw)
Minimum Input Unit	0.0001" (0.001mm = 40 millionths/inch)

Specifications

Machine Dimensions (L x W x H)	118" x 55" x 78" (2846x1284x2024) +31" for Conveyor)
Machine Weight (Heaviest in Class)	5,954 lbs. (2700kgs)
Coolant Pump Power	1.5-Horsepower (1.2kw)
Coolant Tank Capacity	58-gallon Coolant Tank (220 L) (Cutting Oil Only, No Coolant)
Lubrication Distribution (2-liter Capacity)	Way Lube Distributed at 3-6 cc / 15-Minute Cycle
Machine Power Requirements	220vac ±5%, 53-amps, 20kva, 3-phase, 60Hz
Air Requirements	85-PSI at 6-CFM for Parts Catcher, Parts Ejector, & Air bBast