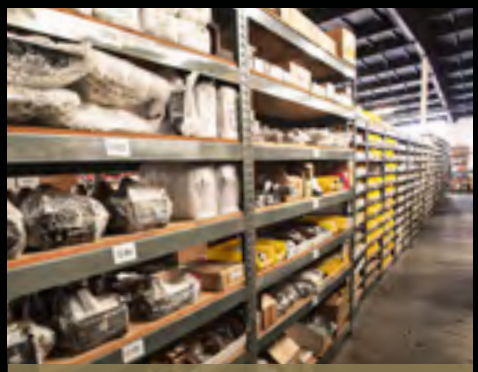

EXPAND
MACHINERY
GEN TURN
20MM – 78MM MULTI AXIS CNC MACHINES
2022 MACHINE CATALOG

MULTI AXIS CNC TURN MILL CENTERS

GEN TURN

HEADQUARTERS LOCATED IN CHATSWORTH, CA

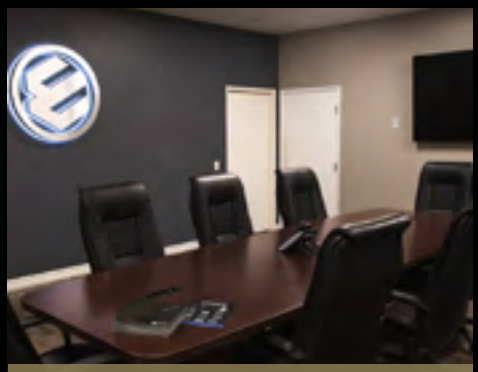
FEATURING A LARGE
4,000 SQ. FT. SHOWROOM



FULLY STOCKED PARTS ROOM

COMPANY HISTORY ROOM

SIMULATION ROOM



TRAINING CENTER

It began with a dream in 1985 to deliver superior quality machine tools to the market that provided the highest value and productivity available. We are still driven by this same commitment to you.

RACING SPONSORSHIPS WITH
ARROW MCLAREN SP RACE TEAM

Expand Machinery produces incredible quality equipment with utmost capability, giving us the resource to compete and win at the highest level."

Nick Snyder
SPM Engineering Manager

PROUD PARTNER OF

ARROW McLAREN SP

EXPAND MACHINERY

GEN TURN

SL-20Y2

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

See following page for specifications

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 & Sub Spindle	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	20mm (Collet Range - 1/16" - 13/16" / 0.0200" - 0.813")
Finished Parts Ejector & Air Blast	Included (Can Pass Long 20mm Parts Through the Sub Spindle)
Maximum Workpiece Length for Front Ejection	110mm Maximum Part Length for Front Ejection from Sub Spindle
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 Blast

EXPAND MACHINERY

GEN TURN

SL-42Y2

Hybrid 42mm 8-Axis CNC Swiss Machine

+ Bar Capacity to Ø 1-5/8”
+ Double “Y” Axis and Double “C” Axis
+ Simultaneous Main & Sub-Spindle Machining
+ 30-Tools with 8-Driven Tools Standard
+ Optional Rotary Synchronous Guide-Bushing
+ High-Performance Mitsubishi M-830 Control

See following page for specifications

Main Spindle

Maximum RPM/Spindle Bearing	6,000 RPM / 5-Bearing Spindle, 3-Front, 2-Rear Ball Bearings
Main Spindle Servo Moto (5.5/7.5Kw)	10-Horsepower 15-minute Duty-Rated (7.5-HP Constant Duty-Rated)
Collet Style for Main & Sub Spindle	Traub-42 / 173E
Collet Closer Style	Lever Action Collet Closer – Driven by Hydraulic Piston
Guide-Bushing Type	Optional Rotary Guide-Bushing uses Hardinge STM38 Bushings
Bar Diameter	Ø1/4" - 1-5/8" (Ø5-42mm) without Guide-Bushing
Maximum Turning Length (Rotary Bushing)	12.20" Single Stroke (310mm) (Rotary Guide-Bushing Optional)
Maximum Turning Length (without Bushing)	4.13" (105mm)
Spindle Bore	Ø1.732" (Ø44mm)

Main Spindle Tooling

O.D. Turning Tool Holders – S1	6 - 16mm (5/8") Square Shank Tool Holders
I.D. Internal Tool Holders – S1	5 - 25mm Shank Round Tool Sleeve Bores
I.D. Deep Hole Drill Positions – S1	2 - 25mm Shank Round Tool Sleeve Bores
Cross Slide Live Tools – S1	6 - ER-20 Collet Chuck Spindles, 4,000 rpm, 2-HP (1.6kw)
Axial Front Slide Live Tool Option – S1	3 - ER-20 Front Axial Live Tools - Optional in lieu of 1 Cross Tool
Maximum Drilling / Tapping Capacity	13mm Drilling / M10 Tapping
Cross Drilling / Tapping Capacity Option	10mm Drilling Capacity / M6 Tapping

Sub-Spindle

Sub-Spindle RPM/Spindle Bearing	6,000 RPM / 4-Bearing - Quad-Duplex Pair Configuration
Main Spindle Servo Moto (2.2/3.7Kw)	10-Horsepower 15-minute Duty-Rated (7.5-HP Constant Duty-Rated)
Collet Style for Main & Sub Spindle	Traub-42 / 173E
Maximum Barstock Diameter	1-5/8" (42mm) (42mm Parts can Through the Sub Spindle)
Spindle Bore	Ø1.732" (Ø44mm) (uses Hydraulic Piston Lever Action Collet Closer)
Finished Parts Ejector & Air Blast	Included
Maximum Workpiece Length for Front Ejection	110mm Maximum Part Length for Front Ejection from Sub Spindle

Sub-Spindle Tooling

O.D. Turning Tool Holders – S2	3 - 16mm Square Shank Turning Tool Holders
I.D. Internal Tool Holders – S2	5 - 25mm 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)
(8-sub spindle tool block can mix live & fixed tools, or 2 radial live tools can be substituted for 2 axial tools on sub spindle tool block)	
Maximum Drilling / Tapping Capacity	13mm Drilling Capacity / M10 Taping on Sub-Spindle
Maximum Cross Drilling / Tapping Capacity	8mm Drilling Capacity / M6 Tapping

Axis

Main Spindle Stroke	12.20" (310mm)
X1, Y1, Z1, X2, Y2, Z2 Rapid Traverse Rate	944 IPM (24m/minute)
X1, Z1 Axis Motor Power	2-Horsepower (1.4kw)
X2, Y1, Y2, Z2 Axis Motor Power	1-Horsepower (.75kw)
X1, Y2 Linear Ways	Ball-Bearing Linear Ways (Point Contact)
Z2, Y1, Z1, Z2 Linear Ways	Roller-Bearing Linear Ways (Line Contact - Twice as Rigid)
Minimum Input Unit	0.0001" (0.001mm = 40 millionths/inch)

Specifications

Machine Dimensions (L x W x H)	121" x 67" x 83" (2925x1690x2100) +29" for conveyor
Machine Weight	11,024 lbs. (5000kgs)
Coolant Pump Power	1-3/4-Horsepower (1.3kw) with Flow Confirmation Monitor)
Coolant Tank Capacity	65-gallon Coolant Tank (250 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%, 80-amps, 30kva, 3-phase, 60Hz
Air Requirements	85-PSI at 6-CFM for Parts Catcher, Parts Ejector, & Air Blast

EXPAND MACHINERY

GEN TURN

32-GT

2 or 3-Axis CNC Gang-Tooled Lathe

- 32mm 1-1/4" Bar Capacity
- 6,000 RPM A2-5 Spindle
- 7.5 Horsepower
- Parts Catcher Standard
- Live Tooling Options
- 8-Station Turret Optional

See following page for specifications

Axis Travel	
X-Travel	8.46" (215mm)
Z-Travel	5.98" (152mm)
Maximum Turning Diameter/Length	7.87" / 5.5" (200mm / 140mm)
Swing Over Bedways	12.59" (320mm)
Axis Feeds	
Rapid Traverse – X, Z	787 ipm 20m/minute
Rated Cutting Feedrate	236 ipm 6m/minute
Mechanical Way System – X/Z	Box Ways / Turcite® Coated & Pressure Lubricated
Slant Bed Angle	20º Slant Bed Angle for Tooling
Axis Drive Motor Power – X-Axis	1.0-HP .75 kw
Axis Drive Motor Power – Z-Axis	1-1/3-HP 1.0 kw
Ballscrew Diameter – X, Z	32mm
Positioning Accuracy – X/Z- X/Z	±0.00015" / ±0.004mm
Positioning Repeatability – X/Z	±0.00008" / ±0.002mm
Least Input Command Increment	0.0001" / 0.000040" / 0.001mm / (40-millionths in metric)
Spindle	
Spindle Nose Mount	A2-5
Spindle Speed	6,000
Maximum Tapping Spindle Speed	2,000 rpm
Maximum Bar Capacity	1-1/4", 32mm
Spindle Bore	34mm
Spindle Bearing – Inside Diameter	70mm (80mm Optional)
Spindle Motor Power – 3.7/5.5kw	7.5-HP / 5.5kw (10-HP 7.5kw Spindle Motor Optional)
Spindle Motor Torque	26 ft. lbs. 35Nm
Spindle Motor Drive Coupling	Belt Drive
Spindle Runout	≤ 0.000040" T.I.R.
Tool Plate / Tool System	
Tool Plate Overall Dimensions	8.66" x 36.45" / 220mm x 706mm
Tool Plate T-Slot Dimensions	21mm Base & 12mm Neck Width, (8mm Base Height /17mm total)
T-Slots	3 T-Slots on 63mm Centers (See Power Point for Drawings)
Turning Tool Shank Size	20mm 3/4" Square Shank
Internal Tool Shank Size	32mm 1-1/4" (25mm for Optional Tool Turret Bores)
Optional Driven Tool Horsepower (.75kw)	1-Horsepower with 2:1 Speed Reduction for Increased Torque
Optional Driven Tool Collet Size (1/2")	2-ER20 Collets in a Hydraulic Positioned Upper/Lower Format
Specifications	
Air Service Requirements	85 psi @ 5-scfm / 5.5 Kg/cm2
Electrical Requirements - Connected Load	10kva, 28-Amps 220vac ±5%, 60-Hz
Coolant Tank Capacity / Motor Power	21-gallons / 1/2-HP / 80-liters / 2-amps
Lubrication Pump	150 watts
Hydraulic Pump Motor / Pressure	1-HP / 500 PSI / .75 kw / 32-bar
Floor space requirements (W x D x H)	81" x 64" x 64" / 282x135x183cm (+ Chip Conveyor)
Machine Weight	4,850 pounds (2,200 kg)
Warranty – 1-year machine warranty	3-year Mitsubishi Control, Motors, & Drive Warranty

EXPAND MACHINERY

GEN TURN

32-NCY

4-Axis CNC Mill/Turn CNC Lathe

+ 36mm 1-3/8" Bar Capacity
+ 18-Tools with 7-Driven Tools Standard
+ "C" Axis and "Y" Axis with 19" Travel
+ 1,181 Inch per Minute Rapid Rates
+ Parts Catcher and Chip Auger Included

See following page for specifications

Axis Travel		
	CNC Controlled Axis	4-Axis (X, Y, Z, C) with High-Performance C-axis
	X-Axis Travel (Vertical Tool)	7.5" (190mm) Linear Ways
	Y-Axis Travel (Cross Tool)	19.3" (490mm) Linear Ways – True Y-axis
	Z-Axis Travel (Sliding Headstock)	6.5" (165mm) Linear Ways
	C-Axis Travel (Rotational Axis)	360 degrees (360,000 Radial Positions)
Spindle		
	Spindle Bore	1.456" (37mm)
	B&S#22 or Traub A-32 Collet Capacity	1.25" (32mm), 1-3/8" (36mm) Collet Adapter Available
	Spindle Speed Range	100-6,000 RPM
	Spindle Horsepower	10-HP 3,000 RPM Spindle Motor (2:1 Pulley Ratio)
	Spindle Center Height	38" (965mm)
	Rigid Tapping on Main Spindle	Yes
	Spindle bearing (Ø110mm)	5-Ball Bearing Spindle, 3-Front & 2-Rear Bearings
Tooling System		
	Number and Size of Turning Stations	6 Tools of 1/2" or 12mm (5 stations of 5/8" Optional)
	Number of Internal Static Tools	5 ID Tool Stations (25mm Bores) for Tool Bushings/Collets
	I.D. Tool Bores (Round Shank)	25mm Bore for ER-20 Collet, Split or Solid Tool Bushings
Driven Tool System		
	Number of Cross Working Driven Tools	4-Cross Driven Tool Stations with ER20 Collet Holders
	Number of End Working Live Tools	3-Axial Driven Tool Stations with ER20 Collet Holders
	Size of Driven Tools (Round Shank)	ER-20 Collet Capacity (1/16" –1/2") (1-13mm) Diameter
	Rigid Tapping with Driven Tools	Included for Main Spindle and Driven Tools
	Driven Tool Programmable Range	0-4,000 RPM – Step-Less Speed Range
	Driven Tool HP	Radial 2.0-HP(1.5kw), Axial 1.0-HP (0.75kw)
Axis Drives		
	Rapid Travers Rate – X, Y, & Z axis	1,181 ipm (30m/minute)
	Maximum Federate for Thread Cutting	236 ipm (6m/minute)
	Minimum Programmable Input	0.0001" (0.001mm = 40 millionths of an inch)
	C-Axis Resolution	0.001 degree (360,000 Radial Positions)
	Brushless AC Servo Motor Drive	X = 2-HP (1.5kw), Y&Z = 1.5-HP (1.0kw)
	Ballscrew Diameter	25mm Diameter - 10mm Pitch Double-Nut Ballscrews
System Requirements		
	Electrical Requirements	16 KVA – 42 amps @ 220 vac ±5% 3-Phase
	Pneumatic Requirements	85 psi @ 10-cfm for Parts Catcher and Spindle Brake
	Hydraulic System Capacity	10-gallon (40 liter) Hydraulic Tank, 500 psi Pressure
	Coolant Pump Motor / Tank Capacity	3/4 HP w/Flow Sensor / 50-gallon Tank with Dual Filtration
	Automatic Metered Lubrication system	3-6cc/15-minute (Adjustable Lubrication Flow Rate)
Machine Dimentions		
	Floor Space – L x W x H	86" x 74" x 76" (2,176 x 1,858 x 1919mm)
	Machine Spindle Center Height	38" (965 mm)
	Machine Net Weight	6,172 lbs. (2,800 kgs)

EXPAND MACHINERY

GEN TURN

36-CS

7-Axis CNC Swiss Machine without guide bushing

- 36mm 1-3/8" Bar Capacity
- Dual "C" Axis and "Y" Axis with 19" Travel
- 27-Tools with 11-Driven Tools
- Simultaneous Main & Sub-Spindle Machining
- Parts Catcher and Chip Conveyor Included
- 1,181 Inch per Minute Rapid Rates

See following page for specifications

Main Spindle

Maximum RPM/Spindle Bearing	6,000 RPM / 5-Bearing Spindle, 3-Front, 2-Rear ø110mm
Spindle Motor	10-HP 3,000 rpm spindle Motor, 2:1 Pulley Ratio
Collet Nose	Brown & Sharpe #22 or Traub A-32
Drawtube Bore	1.456" (37mm)
Maximum Barstock Diameter	1.25" (32mm) Standard 1.375" (36mm) with Adapter
X-Axis Travel	7.28" (185mm)
Y-Axis Travel (true Y-Axis, not compound Y)	19.29" (490mm)
Z-Axis Travel	6.50" (165mm)
Rapid Travel Speed: X, Y, Z	1,181 IPM (30m/minute)
Minimum Input Unit	40 millionths (0.00004") (0.001mm)
OD Turning Tool Positions	6 OD Tools (1/2" or 12mm) (5-5/8" Tool Plate Available)
ID Turning Tool Positions	5 ID Tools
OD Turning Tool Size	1/2" or 12mm (5/8" or 16mm Optional)
ID Turning Tool Bore Size	25 mm
Spindle Center Height	40" (1015mm)

Sub Spindle

Sub Spindle RPM/Spindle Bearing	6,000 RPM / 4-Bearing / Quad-Duplex Pair Configuration
Sub Spindle Motor	5-HP 3,000 rpm Spindle motor, 2:1 pulley ratio
Collet Nose	Brown & Sharpe #22 or Traub A-32
Maximum Barstock Diameter	1.250" in Collet Chuck (1.080" (27.5mm) Pass Thru)
X-Axis Travel	11.53" (293mm)
Z-Axis Travel	11.61" (295mm)
Minimum Input Unit	0.0001" (0.001mm = 40 millionths inch)
ID Turning Tool Bore Size	25mm
Air Blast Nozzle	Included
Finished Parts Ejector	Included, Along with Parts Catcher & Parts Conveyor Belt

Live Tooling

Cross Slide Live Tools	4-ER-20 Cross Slide Live Tools, 4,000 rpm, 2.0 HP (1.5kw)
Front Slide Live Tools	3-ER-20 Front Slide Live Tools, 4,000 rpm, 1.0 HP (0.75kw)
Live Tool Collet Size	ER-20 Collet, Ø1/2" (0.5-13mm) Tool Shank Capacity
Max RPM for Live Tools	4,000 RPM (1 cross live tool can be substituted on sub spindle tool block)

Machine Dimentions

Machine Length	101" (2420mm) (*+ 36" for Chip Conveyor)
Machine Depth	68" (1500mm)
Machine Height	80" (1985mm)
Machine Weight	8,000lbs (3,628kgs)
Coolant Pump	Dual 50psi 3/4-HP Coolant Pumps for Main and Sub Spindle
Coolant Tank Capacity	63-gallon Coolant Tank, with Coolant Flow Confirmation Sensor
Lubrication Distribution	Way Lube Distributed at 3-6 cc / 15-minute Cycle
Machine Power Requirements	220vac ±5%, 63-amps, 3-phase, 60Hz
Air Requirements	85-PSI at 10-CFM for Parts Catcher, Parts Ejector, & Air Blast

EXPAND MACHINERY

52-CS Y2

8-Axis CNC Swiss Machine with 2" Bar Capacity

- 2" Bar Capacity with 6,000 RPM Spindle
- Full "C" Axis on Main Spindle and Sub Spindle
- Full "Y" Axis on Main Spindle and Sub Spindle
- 33 Total Tool Positions with 13 Live Tools
- Simultaneous Main and Sub-Spindle Machining
- Parts Catcher and Chip Conveyor Standard

See following page for specifications

Main Spindle

Maximum RPM / spindle bearing	6,000 RPM
Spindle Motor	10-HP (7.5kw)
Collet Nose / Spindle Bore	Traub A-52 / 52mm (uses TRB-52 collet)
Maximum Barstock Diameter	2" (51mm)
Maximum Cut Length	4.33" (110mm)
Spindle Center Height	43.3" (1100mm)

Sub-Spindle

Sub spindle RPM / spindle bearing	6,000 RPM / 4-bearing Quad-Duplex pair configuration
Spindle Motor	6-HP (4.4kw)
Collet Nose / Spindle Bore	Traub A-42 / 43mm (uses TRB-42 collet)
External Air Blast nozzle	Included for both main & sub spindle
Finished Parts Ejector & air blast	Included for sub spindle

Axis Specifications

X^1-axis Travel	8.66" (220mm)
Y^1-axis Travel (true Y-axis, not compound Y)	24.41" (620mm)
Z^1-axis Travel	16.0" (406mm)
X^2-axis Travel	14.9" (380mm)
Y^2-axis Travel (true Y-axis, not compound Y)	5.11" (130mm)
Z^2-axis Travel	18.1" (460mm)
Rapid Traverse Rate – X^1, X^2, Y^1, Z^1, Z^2	1,181 IPM (30 m/min)
Rapid Traverse Rate – Y^2	196 IPM (5 m/min)
Axis Drive Servo Horsepower: $X^1/Y^1/Z^1$	1-3/4 / 1-3/4 / 1-1/8HP (1.3kw / 1.3kw / .85kw)
Axis Drive Servo Horsepower: $X^2/Y^2/Z^2$	1-1/8 / 1.0 / 1-1/8HP (.85kw /.75kw / .85kw)
Minimum input unit	0.0001" (0.001mm = 40 millionths inch)

Tooling

Main 33-Tool Positions Standard	*All live tools are gear driven w/ ø42mm bearings - no belts!*
Main Spindle Cross slide radial live tools	6-ER-20 cross slide live tools, 6,000 rpm, 2.0 HP (1.5kw)
Main Spindle Front slide axial live tools	3-ER-20 front slide live tools, 6,000 rpm, 1.0 HP (0.75kw)
Main Spindle OD Turning Tool Positions	6 (5x 5/8" + 1x 3/4") (5x16mm) + (1x20mm)
Main Spindle ID Turning Tool Positions	5 ID Tool Bores (25mm)
Sub Spindle ID Turning Tool Positions	5 ID Tool Bores (25mm) (back of main tool bores)
Sub Spindle ID Turning Tool Positions	4 ID Tool Bores (static holders in sub spindle tool block)
Sub Spindle Back slide axial live tools	4-ER-20 (can add 4 more) 6,000 rpm, 4.0 HP (3kw)
	(1 radial live tool can be substituted on sub spindle tool block)

Machine Dimensions

Machine Length	113" (+ 31" for chip conveyor)
Machine Depth	71" (1803mm)
Machine Height	78" (1977mm)
Machine Weight	13,880lbs (6,300kgs)
Coolant Pump	Dual 50psi 1-HP Coolant Pumps for main and sub spindle
Coolant Tank Capacity	63-gallon coolant tank, with coolant flow confirmation sensor
Lubrication distribution	Way lube distributed at 3-6 cc / 15 minute cycle
Hydraulic System Power / Capacity	1-HP / 12-gallons (0.75kw / 46L)
Machine Power Requirements	220vac ±5%, 35kva, 3-phase, 92 amps, 60Hz
Air Requirements	85-PSI at 10-CFM for parts catcher, parts ejector, & air blast

EXPAND MACHINERY

GEN TURN

52-GTS

6-Axis CNC Dual Gang-Tooled Lathe

+ 52mm 2" Bar Capacity
+ Twin 15-HP 6,000 RPM Opposed Spindles
+ Dual Parallel Gang-Tooled Cross-Slides
+ Simultaneous Main & Sub-Spindle Machining
+ "C"-Axis on both spindles for Live Tooling Options
+ Faster than a Twin-Spindle Twin-Turret Lathe

See following page for specifications

Main & Sub Spindle		
	Spindle Motors: 11kw 30-minute rated	15 HP (Spindle Motor Chiller Included)
	Maximum RPM	6,000 RPM with Spindle Orient
	Spindle Bearing	5-Bearing Spindle, 3-Front Ball Bearings, 2-Rear
	Spindle Nose	A2-5
	Collet Nose	Traub A-52 (3J, 22J, 16C, S20 adapters available)
	Drawtube ID	2.086" (53mm)
	Collet Capacity	2.047" (52mm)
	Spindle Center Height to Cross-Slide	3.464" (88mm)
	Spindle Center Height to Floor	42.2" (1070mm)
Machine Axis		
	Axis Drives & Motors (1.0kw)	1.35-HP Mitsubishi Mel-Pro Motors and Drives
	X-Axis Travel: Twin Cross-Slides	13" (330mm) on Both Gang Slides
	Z-Axis Travel: Twin Opposed Spindles	10.63" (270mm) (on Both Main and Sub Spindle)
	Axis Servo Motor Power	X-Axis 2.0 HP (1.5 kW), Z-Axis 1.5 HP (1.0 kW)
	Rapid Travel Speed – X & Z	1,181 IPM (30m/minute)
	Z-Axis Thrust	714 lbs. Thrust (8574 in/lbs.)
	Minimum Input Unit	0.0001" (0.001mm = 40 millionths of an inch)
Tooling		
	OD Turning Tool Size	3/4" Standard
	ID Turning Tool Size	20mm (3/4" Available)
	Cross-Slide T-Slot dimensions	5-T-Slots on 32mm Centers (10mm Slot, 18mm Base)
Fluid Systems		
	Coolant Tank Capacity	52 Gallons (210L) with Coolant Flow Monitor
	Coolant Pump	Dual 3/4-HP, 45-PSI Pumps (for Main and Sub Spindle)
	Hydraulic System: (550psi)	10 gallons (45 liters) ISO VG32 (Mobil DTE-24)
	Spindle Oil Cooler System	5.5 gallons (25 liters) ISO 10 (Mobil Velocite No. 6)
	Way Lubrication Distribution (ISO-VG68)	.5 gallons (2-liters) Distributed at 3-6 cc / 15-Minute Cycle
Machine Dimensions		
	Length	118" (2,980 mm) + 25" Chip Conveyor
	Width	54" (1,356 mm) + 21" Coolant Tank
	Height	78" (1,760 mm)
	Net Weight	9,922 lbs. (4,500 kg)
Machine Requirements		
	Power Requirements	220vac ±5%, 3-Phase, 60-Hz, 63 Amps, 24Kva
	Air Requirements	85-psi, 10-cfm (Parts Catcher, Parts Ejector, Air Blast)

EXPAND MACHINERY

GEN TURN

52-BY2

9-Axis Mill/Turn Lathe with 12-Angle Tools

- 52mm 2" Bar Capacity
- Twin 15-HP 6,000 RPM Opposed Spindles
- 36-Tool Positions - 18-Driven Tools
- Machine at Any Angle with 12-Tool "B"-Axis
- "B" Axis and Dual "Y" Axis for Front & Back Work
- Simultaneous Main & Sub-Spindle Machining

See following page for specifications

Main Spindle	
Maximum Bar Diameter	A2-5 Spindle with 2.008" (51 mm) Bar Capacity
Collet Size / Spindle Bearings	Traub TRB-52 / 5x90mm Ball Bearings, 3-Front, 2-Rear
Maximum Spindle Speed	6,000 RPM (Integral Motor Spindle)
Servo Spindle Motor Horsepower	15-HP (11kw) Peak, 10-HP (7.5kw) 30-min. Rated
X1, Y1, Z1 Axis	
X1, Y1, Z1 Axis Servo Motor	X1= 1.3 HP. (1.0kw) Y1/Z1= 2.0 HP. (1.5kw)
X1 Axis Travel	10.63" (270mm)
Y1 Axis Travel	18.11" (460mm)
Z1 Axis Travel	9.84" (250mm)
Minimum Programmable Input	0.00004" resolution (0.001mm)
X1, Y1, Z1 Rapid Travel Rate	1181 IPM (30m/min) / 0.0001 mm resolution
Main Spindle Tooling	
Number of Driven Tools	6 axial & 6 radial driven and "Any-Angle" tools
Driven Tool Motor Power	5-HP (3.5kw)
Driven Tool Spindle Speed	2,500 RPM Maximum Driven Tool Spindle Speed
Driven Tool Collet Size	ER-20 Collet Spindles (up to 1/2" Tool Shank)
O.D. Turning Tools	5 - 20mm O.D. Turning Tool Holders Available
I.D. Boring Tools	5 - 25mm I.D. Bores Available for Tool Bushings
Sub-Spindle	
Maximum Bar Diameter	2.008" (51 mm)
Collet Size	Traub TRB-52
Maximum Spindle Speed	6,000 RPM (Integral Motor Spindle)
Servo Spindle Motor Horsepower	15-HP (11kw) Peak, 10-HP (7.5kw) 30-min. rated
X2, Y2, Z2 Axis	
X2, Y2, Z2 Axis Servo Motor	X2/Z2 = 1.3 HP. (1.0kw) Y2 = 2.0 HP. (1.5kw)
X2 Axis Travel	18.89" (480mm)
Y2 Axis Travel	18.11" (460mm)
Z2 Axis Travel	10.63" (270mm)
X2, Y2, Z2 Rapid Travel Rate	1181 IPM (30m/min)
Minimum Programmable Input	0.0001" (0.001mm = 40 millionths of an inch)
Ballscrew Diameter	25mm Diameter with 10mm Pitch for All Axes
System Requirements	
Number of Axial Driven Tools	3 Axial Driven Tools, Uses ER-20 Collets
Number of Radial Driven Tools	3 Radial Driven Tools, Uses ER-20 Collets
Driven Tool Motor Power	2.7-HP (2.0kw)
Driven Tool Spindle Speed	2,500 RPM Maximum Driven Tool Spindle Speed
Driven Tool Collet Size	ER-20 Collet Spindles (up to 1/2" Tool Shank)
O.D. Turning Tools	4 - 20mm O.D. Turning Tool Holders Available
I.D. Boring Tools	4 - 25mm I.D. Bores Available for Tool Bushings
Specifications	
Coolant System	80 Gallon Tank, 4-Coolant Pumps with Flow Control
Electrical Requirement	110-Amps, 42kva, 220 vac ±5%, 3-Phase
Air Requirements	85 psi, 20-cfm, for Parts Catcher, Ejector, Oil Mist Unit
Machine Weight	12,345 pounds (5,600 kgs)
Machine Dimentions	110"* x 85" x 82" (WxDxH) (* + 38" for Chip Conveyor)
Shipping Dimentions	150" x 90" x 87" (WxDxH)

EXPAND MACHINERY

GEN TURN

78-MSY

6-Axis Mill/Turn Lathe with 16-Tool Turret

- 78mm 3" Bar Capacity
- Twin 4,000 RPM Opposed Spindles
- 16-Driven Tool Positions each station can mount multiple tools
- "Y" Axis with ±1.968" Travel
- Full "C" Axis on Main and Sub-Spindle
- Complete Front & Back Work

See following page for specifications

Capacity		
	Turning Diameter Maximum / Standard	Ø12.2" (310 mm) / Ø8.2" (210 mm)
	Center Distance	41.7" (1061mm) Between Spindle Centers
	Turning Length	24.8" (630mm) Maximum
Main Spindle		
	Spindle Nose / Bearing Diameter	A2-6 (Bearing Diameter 4.72" / Ø120mm)
	Spindle Bar Capacity	Ø3.070" (78 mm Drawtube I.D. / 88mm Spindle Bore= 3.465")
	Chuck Size Included	Ø10" (with 78mm Bore)
	Spindle Center Height	40" (1,000mm)
	Maximum Spindle Speed	60 - 4,000 RPM (Integral Refrigerated Spindle)
	Main Spindle Motor Power 15/22Kw	30-HP (30-minute duty rating) / 20-HP (constant duty rating)
Sub-Spindle		
	Spindle Nose	A2-6
	Spindle Bar Capacity	Ø2.559" (65 mm drawtube I.D. / 86mm 3.386" spindle bore)
	Chuck Size Included	Ø8" (with 65mm bore) (Ø10" optional)
	Maximum Spindle Speed	60 - 4,000 RPM (Integral Spindle)
	Main Spindle Motor Power 11/15Kw	15-HP (30-minute duty rating) / 10-HP (constant duty rating)
Live Tool Turret		
	Number of Turret Stations	16 (Any combination of 16 ID, OD or Live tool stations)
	Index Time (Adjacent Tool / 180° index)	0.2 seconds / 1.2 seconds High-Speed Servo Indexing
	Live Power Tool/RPM 3.7/5.5 Kw	7.5-HP / 6,000 rpm, 14.75 ft. lbs. torque (20Nm)
	Tool Size/Collet Size	1" (25mm) (for square tool & 32mm round tools) / ER-32 collets
	Tool Holder Type & Size	BMT-65 Base Mount Tooling
B & C-Axis		
	B-Axis Rapid Traverse Rate	1,573 Inch Per Minute (40m per minute)
	B-Axis Travel	29.31" (744mm)
	C-Axis Spindle Radial Resolution / Speed	360,000 Radial Positions with Full Contouring Capability / 600 RPM
Axis Specifications		
	Axis Travel – X / Y / Z Axis	X= 9.05 / Y= ±1.968" / Z= 23.7" (230mm) / (±50mm) / (700mm)
	Rapid Travers Rate – X / Y / Z Axis	630 / 236 / 1,574 ipm (16 / 6 / 40 m/minute)
	Axis Motor Power	3-HP in X, Y, Z axis
	Axis Continuous Thrust Rating	X = 2142, Y = 2924, Z = 1425 pounds of Thrust Force
	Minimum Programmable Input	0.0001" (0.001mm = 40 millionths of an inch)
Fluid Capacity		
	Hydraulic System	8-gallons (30 Liters) with 5-HP (3.5kw) Pump Motor
	Dual Coolant Pumps	2x 1.7 HP Pumps for Tooling / 2 Pumps for Chip Flushing
	Coolant Tank	74-gallon (280 Liters) coolant tank
Specifications		
	Machine Weight	17,650lbs (8,000 kgs) - Shipping Weight 18,680 lbs. (8472kgs)
	Electrical Requirement	56 KVA, 220vac ±5%, 3-phase, 60 Hz, 130 amps
	Air Requirement	85-psi @ 8-cfm for Parts Catcher, Ejector, Oil Mist Lubricator
	Machine Dimensions	Length 145"* / Depth 82"/ Height 82" (*+44" for Chip Conveyor)
	Shipping Dimensions	Length 200" / Depth 90"/ Height 93"

EXPAND MACHINERY

GEN TURN

78-TTMY

8-Axis Mill/Turn Lathe with Twin 16-Tool Turrets

- 78mm 3" Bar Capacity
- Twin 4,000 RPM Opposed Spindles
- Glass Scale Feedback on X1 & X2 Axes
- 32-Driven Tool Positions each station can mount multiple tools
- "Y" Axis with 3.936" Travel
- Simultaneous Main & Sub-Spindle Machining
- Full "C" Axis on Main and Sub-Spindle

See following page for specifications

Capacity		
	Turning Diameter	7.48" (190 mm) maximum, 6.7" (170mm) standard
	Turning Length/Center Distance	15.75" (400mm) / 36.22" (920mm) between centers
Main Spindle / Sub-Spindle		
	Spindle nose / Bearing Diameter	A2-6
	Spindle Bar Capacity	3.08
	Chuck Size (Optional)	8" with 68mm bore
	Spindle Center Height	46.45" (1,180mm)
	Maximum Spindle Speed	60-4,000 RPM (Integral Spindle)
	Spindle Motor Horsepower	30-HP peak, 20-HP (30-minute duty rating)
	Sub Spindle motor horsepower	20-HP peak, 15-HP (30-minute duty rating)
Live Tool Turrets		
	Number of Turret Stations	32 (Any combination of 32 ID, OD or Live tool stations)
	Index Time (Adjacent Tool / 180° index)	0.2 seconds / 1.2 seconds High-Speed Servo Indexing
	Live Power Tool/RPM	7-HP / 6,000 rpm, 14.75 ft. lbs. torque (20Nm)
	Tool Size/Collet Size	25mm (for square tool and round tool) / ER-32
	Tool Holder Type & Size	BMT-65 Base Mount Tooling
Y, C, & B-Axis		
	Y-Axis Travel	3.93" of Travel - ±1.968" off of Centerline (±50mm)
	Y-Axis Rapid Feed Rate	236 Inch Per Minute (6m per minute)
	C-Axis Spindle Radial Resolution	360,000 Radial Positions with Full Contouring Capability
	B-Axis Distance Between Spindles	36" (914mm)
	B-Axis Rapid Traverse Rate	1,573 Inch Per Minute (40m per Minute)
	B-Axis Travel	25.59" (650mm)
Axis Specifications		
	Axis Travel – X1, X2 - Axis	X1 5.9" (150mm), X2 9.05" (230 mm) with Glass Scale Feedback
	Axis Travel – Z1, Z2 - Axis	Z1 17.32" (440mm), Z2 17.32" (440mm)
	Rapid Travers Rate – X1, X2 -Axis	630 ipm (16 m/minute)
	Rapid Travers Rate – Z1, Z2 - Axis	1,573 ipm (40 m/minute)
	Minimum Programmable Input	0.0001" (0.001mm = 40 millionths of an inch)
Fluid Capacity		
	Hydraulic System	10.5 gallons (40 Liters) with 3-HP (2.2kw) Pump Motor
	Dual Coolant Pumps	2x 1.7 HP Pumps for Tooling & 2 Pumps for Chip Flushing
	Coolant Tank	70-gallon (280 Liters) Coolant Tank
Specifications		
	Machine Weight	22,751lbs. (10,320 kgs)
	Electrical Requirement	49.5KVA (220vac ±5%, 3-phase, 60 Hz, 130 amps)
	Air Requirement	85-psi @ 8-cfm for Parts Catcher, Ejector, Oil Mist Lubricator
	Machine Dimensions	Width 165" / Depth 88"/ Height 84" (Includes Chip Conveyor)
	Shipping Dimensions	Width 181" / Depth 90"/ Height 89"