

SMEC

SL 8500 series

HORIZONTAL TURNING CENTER



- 1988 - Started as Samsung Heavy Industries Machine Tools Business
- 1989 - Horizontal and vertical machining center technology partnership with OKK Japan
- 1991 - Turning center and vertical machining center technology partnership with Mori Seiki
- 1996 - 5-sided processing center technology partnership with Toshiba
- 1999 - Spun out from Samsung Aerospace Industries and established SMEC Co., Ltd

SMEC Company
Engineering
Machine Tools
Samsung

SL 8500/8500X/8500L/8500XL SL 8500M/8500XM/8500LM/8500XLM

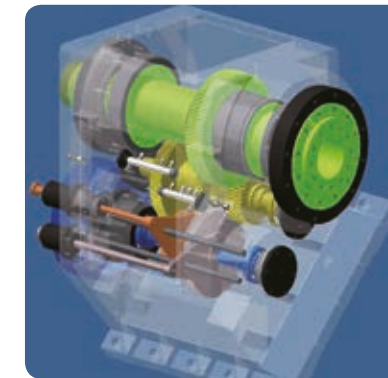
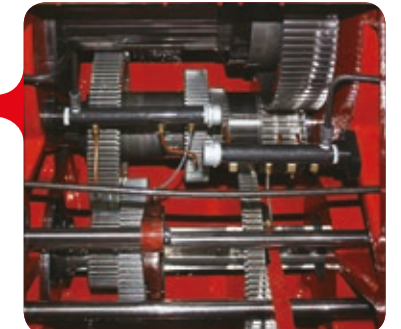
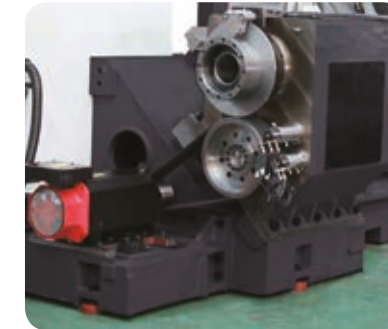
Strongest in class with superb structural design
Simultaneous heavy duty and precision turning

- 45 degree torque tube type bed to support heavy duty turning
- Significantly reduced non-cutting time and efficient turning
- Low-center of gravity reducing vibration, thermal deformation and improving rigidity



Main Spindle Motor and Geared Headstock

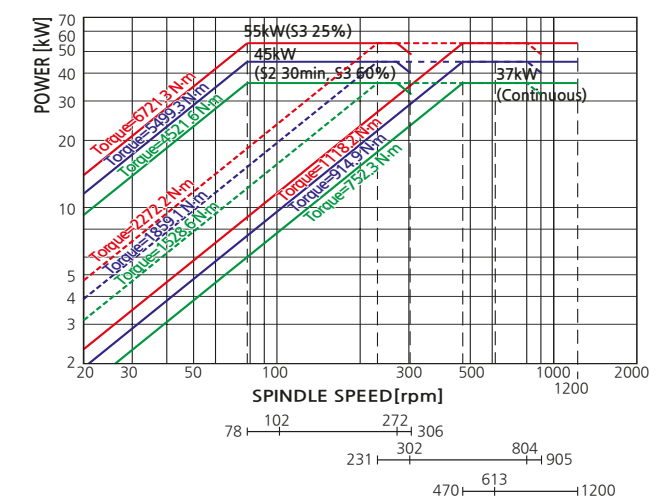
Heavy-duty cutting with a maximum 6,721 N.m of torque via 3-step gearbox transmission



One Body Spindle and Headstock Construction for Minimal Thermal Expansion

By integrated the gearbox and main spindle, we improve cooling efficiency by cooling the gearbox and main spindle at the same time. And through the integration, the usage of belts was reduced, which significantly reduced the amount of noise and vibration caused by belts.

Spindle Power & Torque Diagram SL 8500 32" Chuck



An innovative high precision, heavy duty CNC Lathe, integrated with all of SMEC's advanced technology - SL 8500 series

Spindle speed
500 rpm

Spindle motor(cont./Max)
37/55 kW

Rapid traverse(X/Z)
12/18 m/min (SL 8500[M])
12/15 m/min (SL 8500X[M])
12/10 m/min (SL 8500L/XL[M])

Feed motor(X/Z)
7.5/11 kW

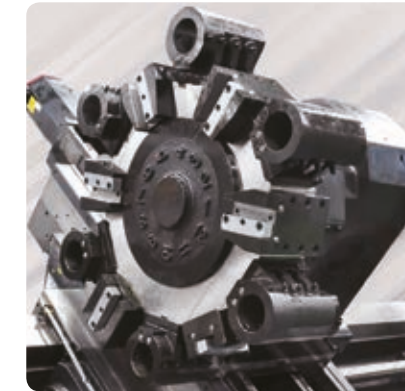
Max. machining length
1,000 mm (SL 8500[M])
2,000 mm (SL 8500X[M])
3,200 mm (SL 8500L[M])
5,050 mm (SL 8500XL[M])

Max. machining diameter
900 mm

Highly Reliable and Rigid Structural Design

- One piece Meehanite casting with heavily ribbed torque tube design
- Rigid bed supports for powerful cutting
- Excellent vibration dampening and thermal displacement design

SL 8500 (High Speed Servo Index Hydraulic Turret)



Indexing Time
0.25 sec(60 Hz)
Number of tool positions
12 stations

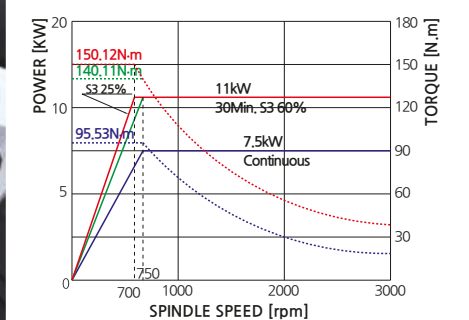
High Speed, Heavy Duty Servo Turret

Driven by a high torque servo motor, the 12-station heavy -duty turret can accept tools on both left and right side of each station. Turret indexing (repeatability ± 0.01) is non-stop, bi-directional with a fast 0.25 second next station index time. Large diameter ($\varnothing 287$) precision Curvic coupling with 18,225kgf clamping force enables precision as well as heavy-duty cutting.

SL 8500M (BMT High Speed Turret)



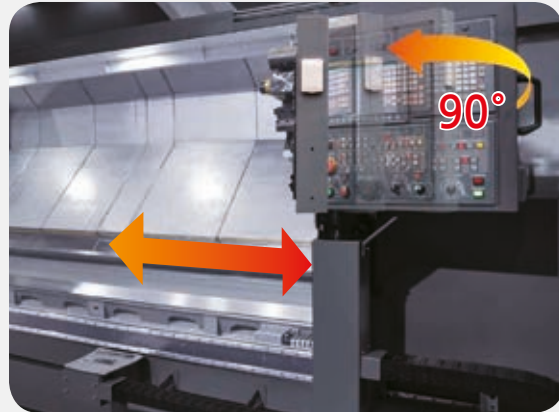
Turret Torque Diagram



Indexing Time
0.25 sec(60 Hz) Number of tool positions
12 stations Milling Spindle Speed
3,000 rpm Tool Holder
BMT 85

BMT Milling Turret (M Type)

SL 8500M is equipped with standard 12-station BMT turret capable of accepting rotary tools at any station, providing flexible machining thru various machining operations in just one set-up. Each BMT holder is securely tightened by 4 screws, allowing the turret to perform heavy-duty cutting, milling and drilling operations. Turret indexing is non-stop, bi-directional with a fast 0.25 second next station index time.



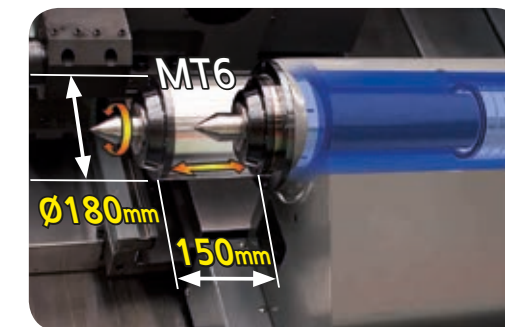
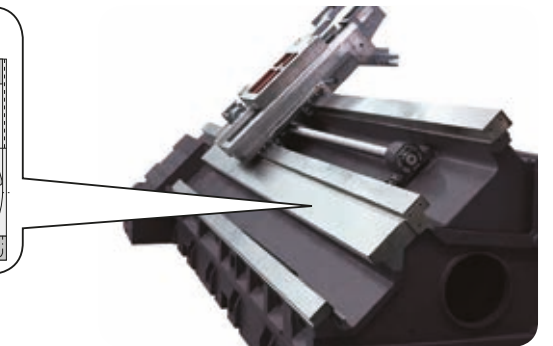
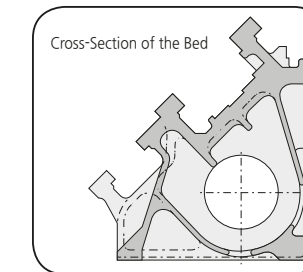
Centralized Operation Panel

The centralized operation panel with its 10.4 inch color TFT LCD monitor is able to swivel 90 degrees, providing operators with easy access to the control panel while working on the machine.

Rigid 45 degree Slant Bed

45 degree slant torque tube design bed and wide guide slide way ensure long term rigidity and machining accuracy.

Also, the Slant Type structure allows for easier access to the workpiece and superb chip discharge.

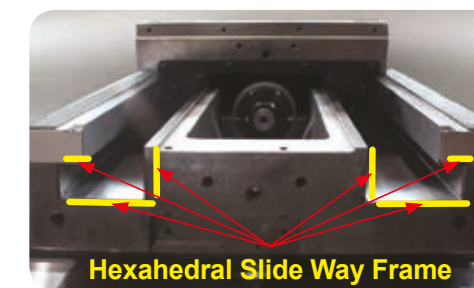


Programmable Tailstock(Carriage direct-coupled) [Std.]

The programmable tailstock body mounted is on wide guide ways to ensure rigid work piece support.

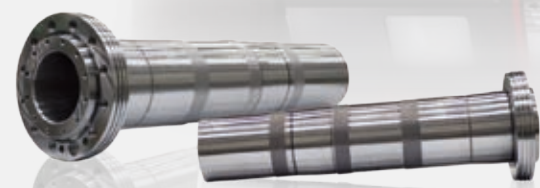
Pre-tensioned and Double Anchored Ballscrews

All axes ballscrews are pre-tensioned, heat treated and fixed by double anchors on both ends, providing ultimate rigidity and minimal thermal growth.



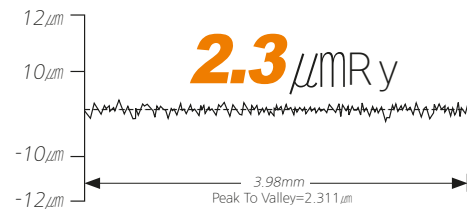
Hexahedral Slide Way Frame (X-axis)

Wide integral way is machined from the casting, induction hardened and precision ground to ensure long-term rigidity, machining accuracy and heavy-duty machining.



High Precision

Surface Roughness



Model : SL 8500L

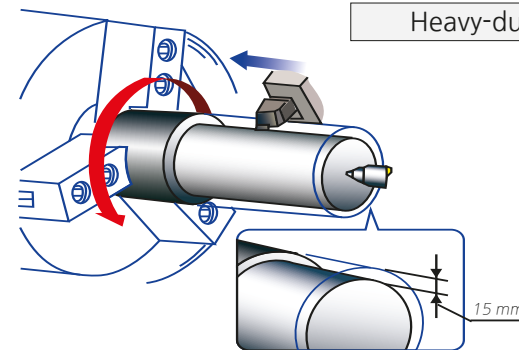
Roundness



Cutting condition	
Tool	Diamond tool <nose radius 0.5mm>
Material	AL150<Aluminum>
Cutting speed	230 m/min
Feedrate	0.05 mm/rev
Depth of cut	0.1 mm
Outer diameter	200 mm
Filter	1-50

Processing Speed

Turning Performance (material:SM45C) SL 8500L



Heavy-duty cutting (O.D) <32mm×32mm qualified tool>

Spindle speed

367 rpm

Cutting speed

150 m/min

Depth of cut

15 mm <Spindle Load 65%>

Feedrate

0.4 mm/rev

Standard Accessories

Optional Accessories



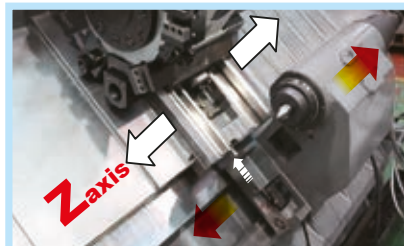
Automatic Lubricator



Auto Door



Tool Presetter



Programmable Tailstock



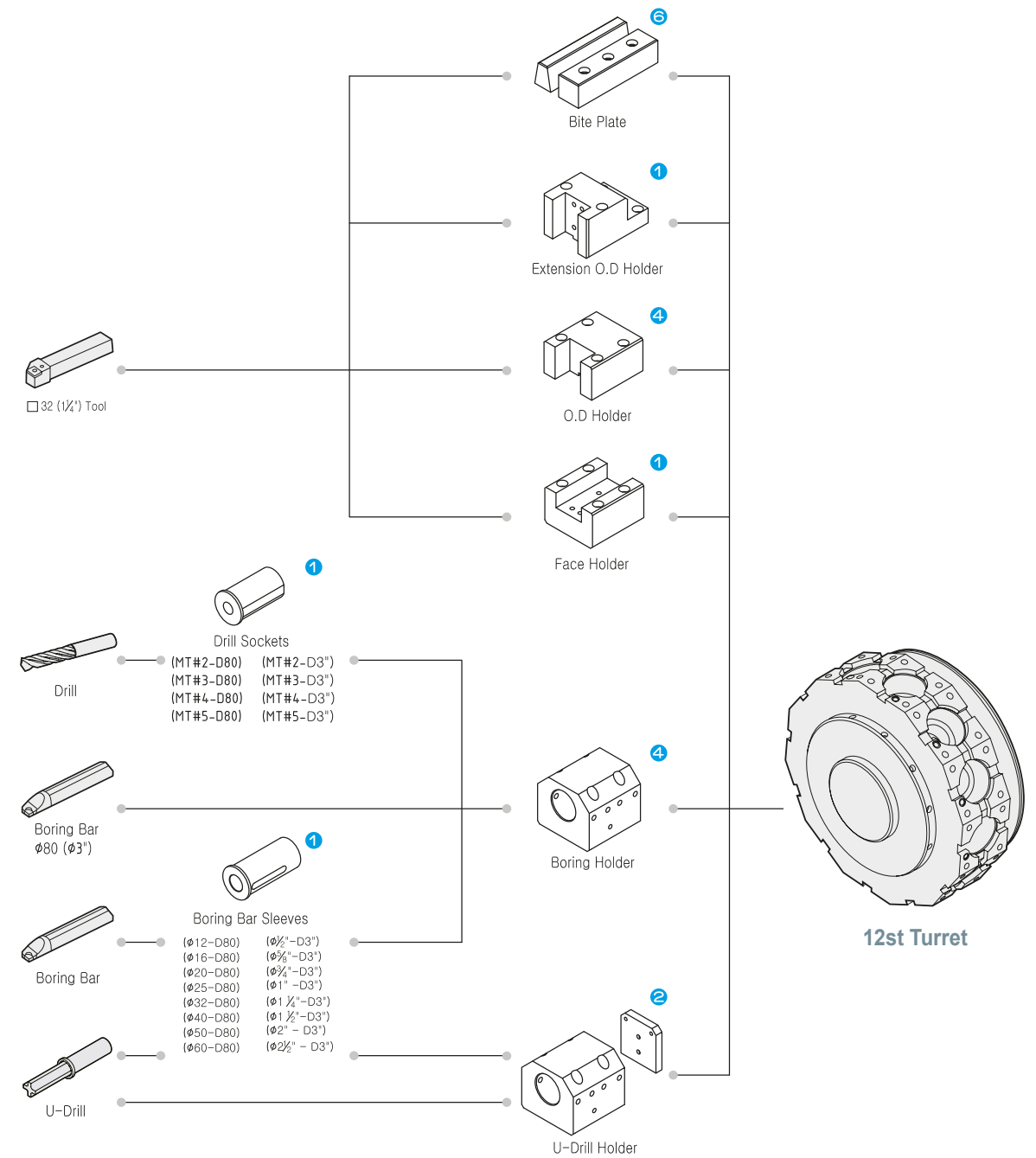
Chip Conveyor



Steady Rest & Preparation

Tooling System

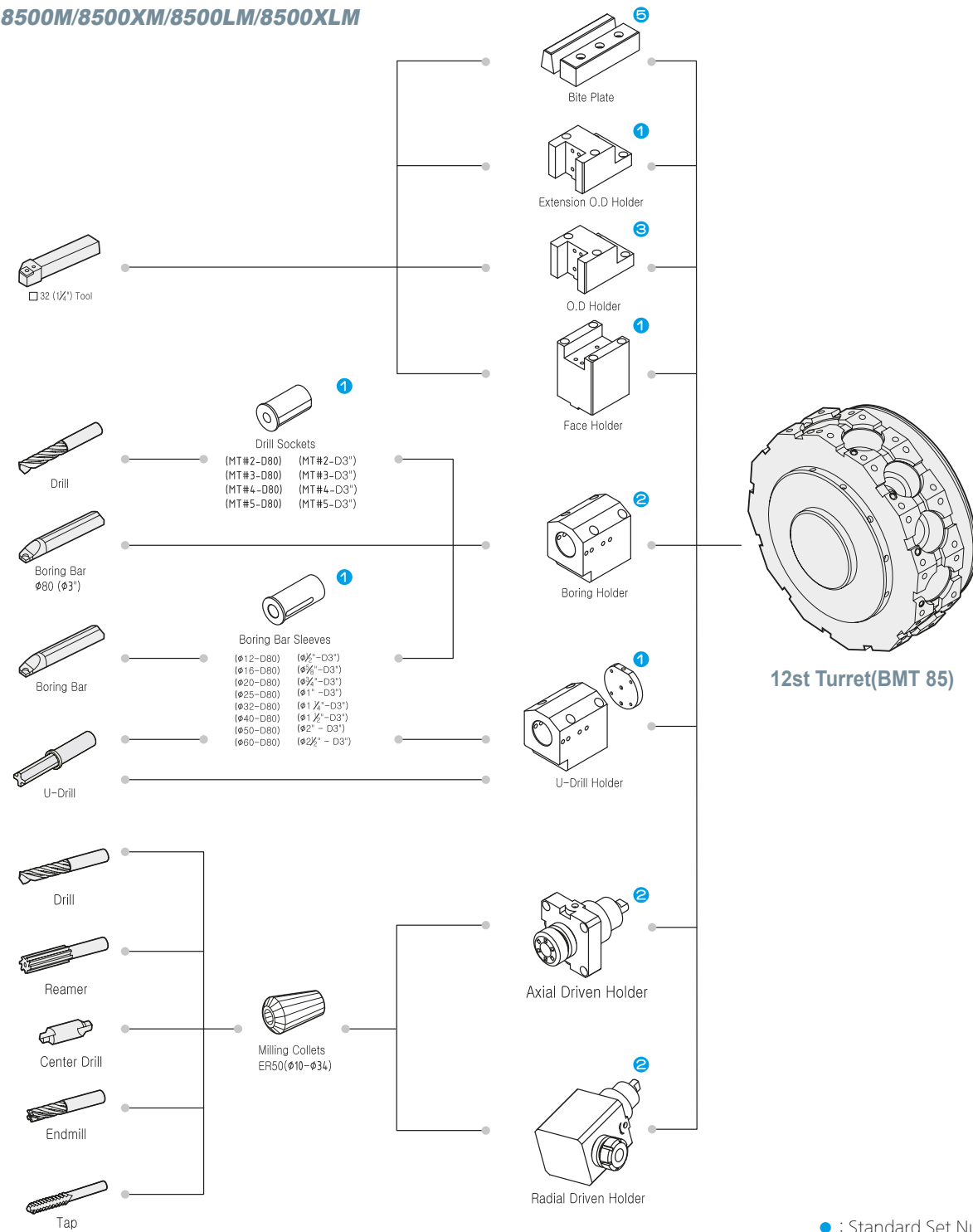
SL 8500/8500X/8500L/8500XL



● : Standard Set Numbers

Tooling System

SL 8500M/8500XM/8500LM/8500XLM

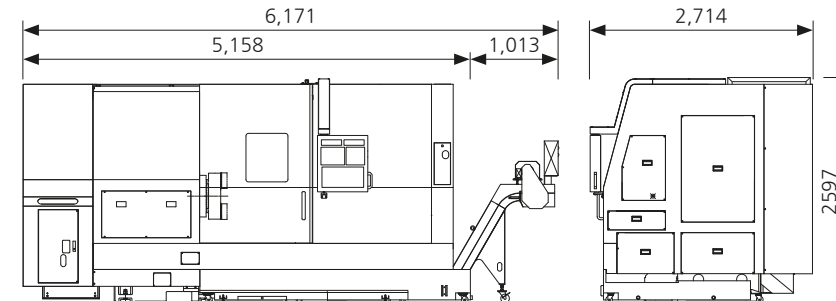


● : Standard Set Numbers

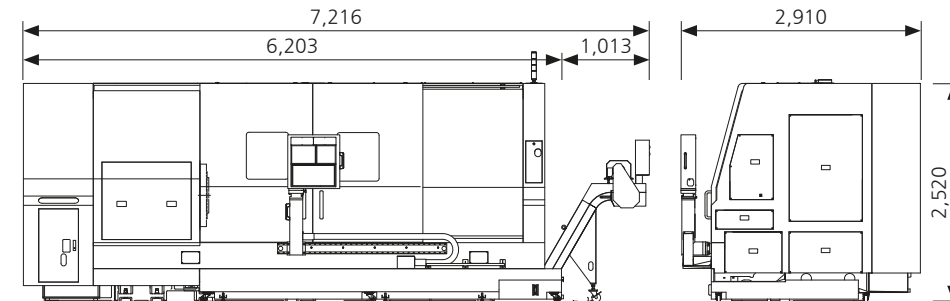
Machine Dimensions

Unit : mm

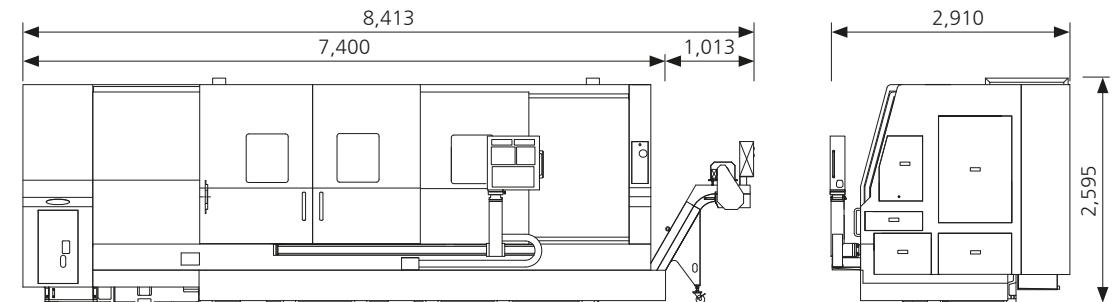
SL 8500/8500M



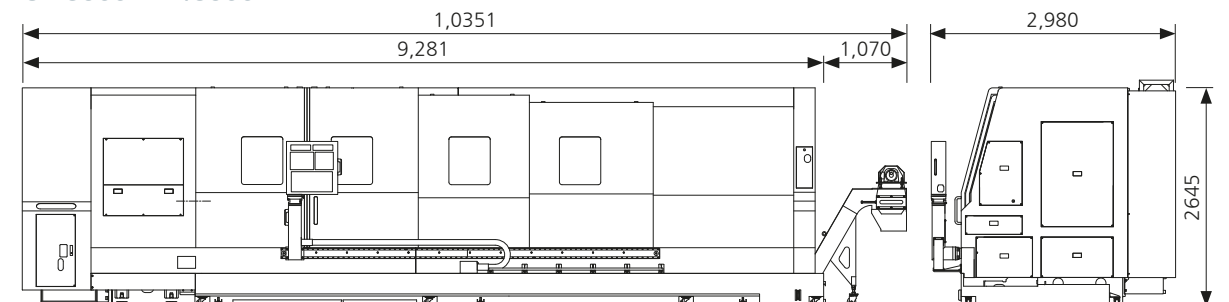
SL 8500X/8500XM



SL 8500L/8500LM



SL 8500XLM/8500XLM



Unit : mm

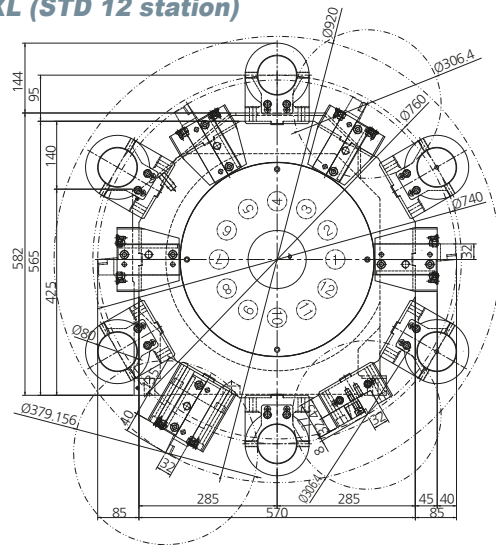
Unit : mm



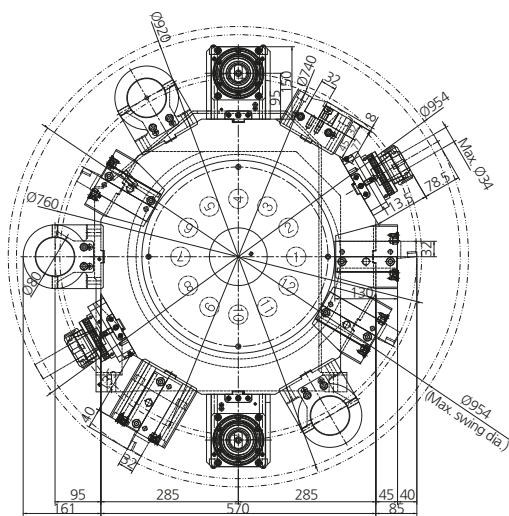
Turret Head Interference

Unit : mm

SL 8500/8500X/8500L/8500XL (STD 12 station)



SL 8500M/8500XM/8500LM/8500XLM (BMT 85)



Standard Accessories

- Chuck clamp confirmation
- Chuck clamp foot switch
- Chuck pressure switch
- Coolant system
- Door interlock
- Full splash guard with coolant tank
- Jaw (soft 3set, hard 1set)
- Leveling unit
- Manual/Part list (1set)
- Patrol lamp (3 colors)

- Safety precaution name plate
- Spindle orientation
- Tailstock (programmable)
- Tool box
- Tool holders
- Work light (LED lamp)

Optional Accessories

- Air blower
- Air conditioners (electric cabinet)
- Air gun
- Auto door
- Bar Feeder Interface
- Chip bucket
- Chip conveyor
- Coolant blower
- Coolant chiller
- Coolant gun
- Coolant level switch
- Counter (total, multi, tool, work)
- Dual pressure chucking
- Oil mist collector
- Oil skimmer
- Robot interface
- Special chuck
- Steady rest (single, dual)
- Tool presetter (manual/auto)
- Transformer

Major Specifications

DESCRIPTION			SL 8500		SL 8500M	
			A type	B type	A type	B type
Chuck	Chuck size	inch	32"			
Capacity	Swing over bed	mm	1,030			
	Swing over cross slide	mm	800			
	Max. turning diameter	mm	900			
	Max. milling diameter	mm	-		843	
	Max. machining length	mm	1,000			
Spindle	Bearing type	-	Cylindrical Taper Roller [Taper]		Taper Roller(Big Bore)	
	Spindle speed	rpm	500 [320, 300]			
	Spindle nose	ASA	A1-20 [A1-20]		A2-20	
	Draw tube ID	mm	232			
	Spindle bore diameter	mm	321 [321]		365	
	Spindle motor (Cont./Max)	kW	37/55			
Travels	X-axis travel	mm	470			
	Z-axis travel	mm	1,050			
	X-axis Rapid traverse rate	m/min	12			
	Z-axis Rapid traverse rate	m/min	18			
Turret	Number of tool stations	ea	12		12 (BMT85)	
	Turning tool shank size	mm	32			
	Boring bar diameter	mm	80			
	Turret index time(next station swivel time)	sec	0.25			
	Rotary tool speed	rpm	-		3,000	
	Rotary tool motor (Cont./Max)	kW	-		7.5/11	
Tailstock	Quill diameter	mm	180			
	Quill stroke	mm	150			
	Spindle taper	MT	MT6 (Built-in)			
Machine	Size (with Side Chip conveyor) LxWxH	mm	5,158(6,170) × 2,564 × 2,595			
	Size (with Rear Chip conveyor) LxWxH	mm	-			
	weight	kg	17,500			
	Coolant tank capacity	Liter	400			
ELECTRIC POWER SUPPLY		kVA/V	65/220		69/220	
CONTROLLER			FANUC, SIEMENS			

※Figures in inches are converted from metric measurements.

Major Specifications

DESCRIPTION			SL 8500X		SL 8500XM	
			A type	B type	A type	B type
Chuck	Chuck size	inch	32"			
Capacity	Swing over bed	mm	1,030			
	Swing over cross slide	mm	800			
	Max. turning diameter	mm	900			
	Max. milling diameter	mm	-		843	
	Max. machining length	mm	2,000			
Spindle	Bearing type	-	Cylindrical Taper Roller [Taper]		Taper Roller(Big Bore)	
	Spindle speed	rpm	500 [320, 300]			
	Spindle nose	ASA	A1-20 [A1-20]		A2-20	
	Draw tube ID	mm	232			
	Spindle bore diameter	mm	321 [321]		365	
	Spindle motor (Cont./Max)	kW	37/55			
Travels	X-axis travel	mm	470			
	Z-axis travel	mm	2,050			
	X-axis Rapid traverse rate	m/min	12			
	Z-axis Rapid traverse rate	m/min	15			
Turret	Number of tool stations	ea	12		12 (BMT85)	
	Turning tool shank size	mm	32			
	Boring bar diameter	mm	80			
	Turret index time(next station swivel time)	sec	0.25			
	Rotary tool speed	rpm	-		3,000	
	Rotary tool motor (Cont./Max)	kW	-		7.5/11	
Tailstock	Quill diameter	mm	180			
	Quill stroke	mm	150			
	Spindle taper	MT	MT6 (Built-in)			
Machine	Size (with Side Chip conveyor) L×W×H	mm	6,203(7,216) × 2,760 × 2,595			
	Size (with Rear Chip conveyor) L×W×H	mm	-			
	weight	kg	20,000			
	Coolant tank capacity	Liter	400			
ELECTRIC POWER SUPPLY		kVA/V	65/220		69/220	
CONTROLLER			FANUC, SIEMENS			

※Figures in inches are converted from metric measurements.

Major Specifications

DESCRIPTION			SL 8500L		SL 8500LM	
			A type	B type	A type	B type
Chuck	Chuck size	inch	32"			
Capacity	Swing over bed	mm	1,030			
	Swing over cross slide	mm	800			
	Max. turning diameter	mm	900			
	Max. milling diameter	mm	-		843	
	Max. machining length	mm	3,200			
Spindle	Bearing type	-	Cylindrical Taper Roller [Taper]		Taper Roller(Big Bore)	
	Spindle speed	rpm	500 [320, 300]			
	Spindle nose	ASA	A1-20 [A1-20]		A2-20	
	Draw tube ID	mm	232			
	Spindle bore diameter	mm	321 [321]		365	
	Spindle motor (Cont./Max)	kW	37/55			
Travels	X-axis travel	mm	470			
	Z-axis travel	mm	3,270			
	X-axis Rapid traverse rate	m/min	12			
	Z-axis Rapid traverse rate	m/min	10			
Turret	Number of tool stations	ea	12		12 (BMT85)	
	Turning tool shank size	mm	32			
	Boring bar diameter	mm	80			
	Turret index time(next station swivel time)	sec	0.25			
	Rotary tool speed	rpm	-		3,000	
	Rotary tool motor (Cont./Max)	kW	-		7.5/11	
Tailstock	Quill diameter	mm	180			
	Quill stroke	mm	150			
	Spindle taper	MT	MT6 (Built-in)			
Machine	Size (with Side Chip conveyor) L×W×H	mm	7,400(8,413) × 2,760 × 2,595			
	Size (with Rear Chip conveyor) L×W×H	mm	-			
	weight	kg	23,000			
	Coolant tank capacity	Liter	400			
ELECTRIC POWER SUPPLY		kVA/V	65/220		69/220	
CONTROLLER			FANUC, SIEMENS			

※Figures in inches are converted from metric measurements.

Major Specifications

DESCRIPTION			SL 8500XL		SL 8500XLM	
			A type	B type	A type	B type
Chuck	Chuck size	inch	32"			
Capacity	Swing over bed	mm	1,030			
	Swing over cross slide	mm	800			
	Max. turning diameter	mm	900			
	Max. milling diameter	mm	-		843	
	Max. machining length	mm	5,050			
Spindle	Bearing type	-	Cylindrical Taper Roller [Taper]		Taper Roller(Big Bore)	
	Spindle speed	rpm	500 [320, 300]			
	Spindle nose	ASA	A1-20 [A1-20]		A2-20	
	Draw tube ID	mm	232			
	Spindle bore diameter	mm	321 [321]		365	
	Spindle motor (Cont./Max)	kW	37/55			
Travels	X-axis travel	mm	470			
	Z-axis travel	mm	5,100			
	X-axis Rapid traverse rate	m/min	12			
	Z-axis Rapid traverse rate	m/min	10			
Turret	Number of tool stations	ea	12		12 (BMT85)	
	Turning tool shank size	mm	32			
	Boring bar diameter	mm	80			
	Turret index time(next station swivel time)	sec	0.25			
	Rotary tool speed	rpm	-		3,000	
	Rotary tool motor (Cont./Max)	kW	-		7.5/11	
Tailstock	Quill diameter	mm	180			
	Quill stroke	mm	150			
	Spindle taper	MT	MT6 (Built-in)			
Machine	Size (with Side Chip conveyor) L×W×H	mm	9,400(10,413) × 2,860 × 2,595			
	Size (with Rear Chip conveyor) L×W×H	mm	-			
	weight	kg	27,000			
	Coolant tank capacity	Liter	400			
ELECTRIC POWER SUPPLY		kVA/V	65/220		69/220	
CONTROLLER			FANUC, SIEMENS			

※Figures in inches are converted from metric measurements.

NC 사양 / FANUC Series

	Item	Specification	FANUC series
Controlled axis	Max. feed axes		4 AXIS
	Feed axes		X/Z/(Cs)
	Max. simultaneously controlled axis		4
	Least command increment	0.001mm / 0.0001"	○
Operation functions	Pulse handle feed	X1, X10, X100	○
	Feedrate per minute	G98	○
	Feedrate per revolution	G99	○
Interpolation functions	Linear interpolation	G01	○
	Circular interpolation	G02, G03	○
	Dwell	G04	○
	Polar cordinate interpolation	G12.1, G13.1	○
	Cylindrical interpolation	G70.1	○
	Variable lead thread cutting	G34	○
	Continuous threading		○
	Reference position return	G28	○
	Reference position return check	G27	○
Feed function	Rapid traverse rate override	F0, 25%, 50%, 100%	○
	Feedrate override		0~150%
Spindle function	Spindle orientation		○
	Rigid tapping		○
Tool functions	Tool number command	T4-Digt / T2-Digt	T4-Digt
	Tool nose radius compensation	G40 ~ G42	○
	Tool offset pairs		○
	Tool geometry/wear offset	GEOMETRY & WEAR DATA	○
	Tool life management		○
	Tool path graphic display		○
	Automatic tool offset	G36, G37	○
	Direct input of tool offset value measured B		○
Program input	Absolute/incremental programming		○
	Multiple repetitive cycle	G70 ~ G76	○
	Canned cycles	G90, G92, G94	○
	Inch/metric conversion	G20 / G21	○
	Program restart		○
	Retraction for rigid tapping		○
	Max. programmable dimension	±99999.999mm/±9999.9999"	○
	M function	M3 digit	○
	Custom macro		○
	Canned cycle for drilling		○
	Direct drawing dimension programming		○
	Programmable data input	G10	○
	Optional block skip		○
	Workpiece coordinate system	G52 ~ G59	○
	Number of registerable programs		400EA
Setting and display	Alarm & Operator history display	ALARM & OPERATION DISPLAY	○
	Run hour and parts count display	RUNNING TIME & PART NO. DISPLAY	○
	Display spindle & servo overload	SPINDLE & SERVO LOAD DISPLAY	○
	Self-diagnosis function		○
	Extended part program editing	COPY,MOVE, CHANGE OF NC PROGRAM	○
	Display screen		10.4" color
Data input/output	Memory card input/output		○
	USB memory input/output		○
Editing operation	Part program storage size	512Kbyte(1280m)	○
Manual guide i	Manual Guide i		○



Fanuc Manual Guide i

Erstellen Sie Ihre Teileprogramme
in nur wenigen Schritten

Reduzieren Sie den Zeitaufwand bei der Überführung Ihrer Zeichnungen in die Produktion:

Mit dem FANUC MANUAL GUIDE i lassen sich sowohl einfache als auch hoch komplizierte Maschinenzyklen inklusive Dreh-, Fräs-, Bohr- und Messzyklen schnell und einfach umsetzen. Dabei unterstützt die Software Sie durch intuitive interaktive Benutzerführung sowie spezielle Funktionen zur einfachen Teileprogrammierung und Simulation.

Merkmale:

- Bedienerfreundliche Programmierumgebung
- Erweiterte Zyklusbearbeitung (Drehen und Schleifen)
- Leistungsstarke Profilberechnung
- Nahtloser Umgebungswechsel
- Werkzeugverwaltungsfunktion
- Messzyklen
- Restschnitt
- Bearbeitungssimulationen

Die benutzerfreundliche Software MANUAL GUIDE i zur Fertigungsprogrammierung vereinfacht den Betrieb Ihrer Maschine. Die innovative Programmierung ermöglicht die Entwicklung von der Zeichnung zum Werkstück in kürzester Zeit. Dank MANUAL GUIDE i die CNC-Maschinen von FANUC schnell und einfach für Dreh-, Schleif- und Verbundbearbeitungsprozesse programmiert werden.

Selbsterklärende Menüs und grafische Simulationen führen den Benutzer durch die Programmierung, was selbst bei komplexen Bearbeitungsvorgängen zu hocheffizienten Ergebnissen führt.



Siemens Sinumerik 828D

Mehr Produktivität mit SINUMERIK 828D
– Smart Operation

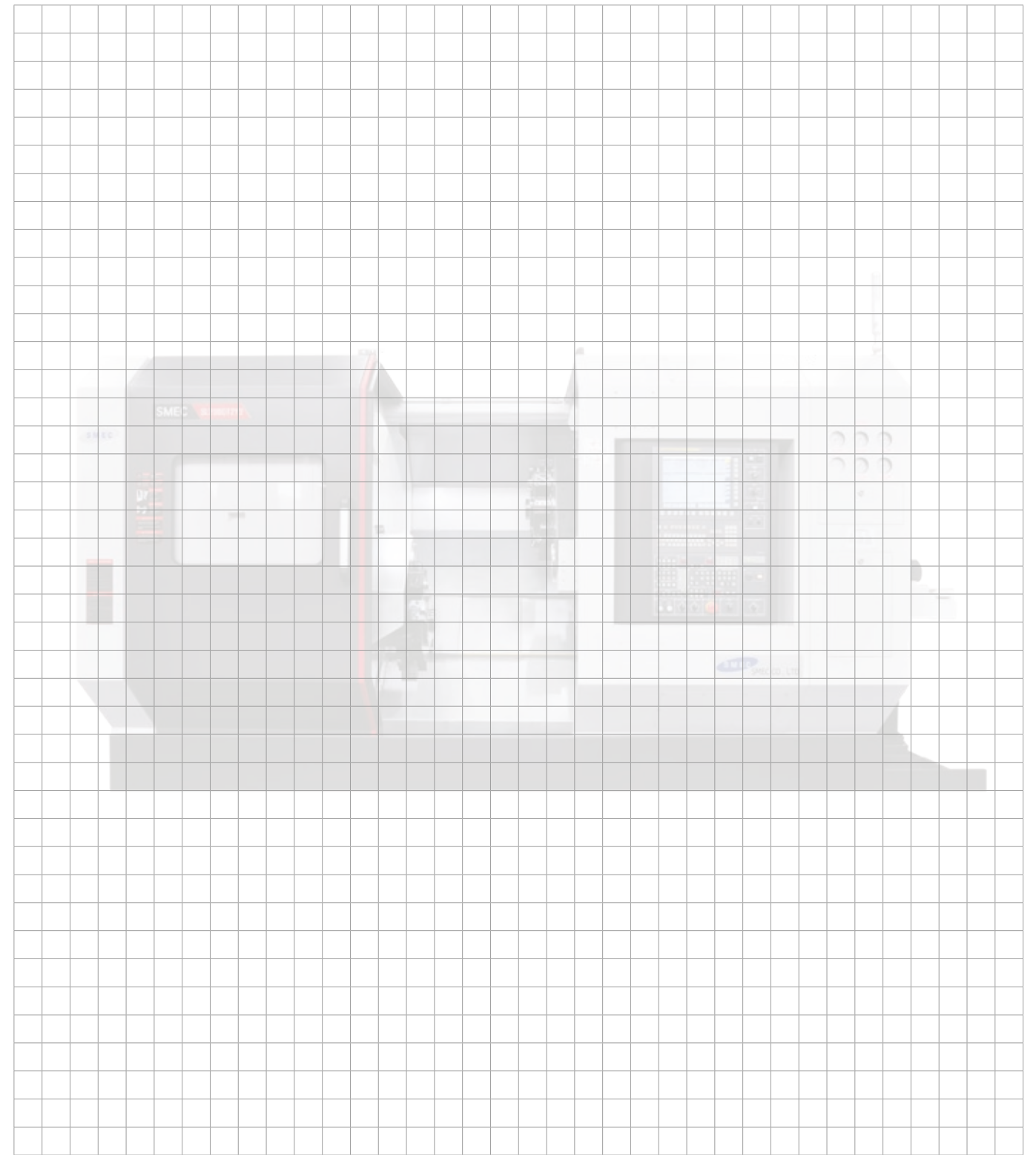
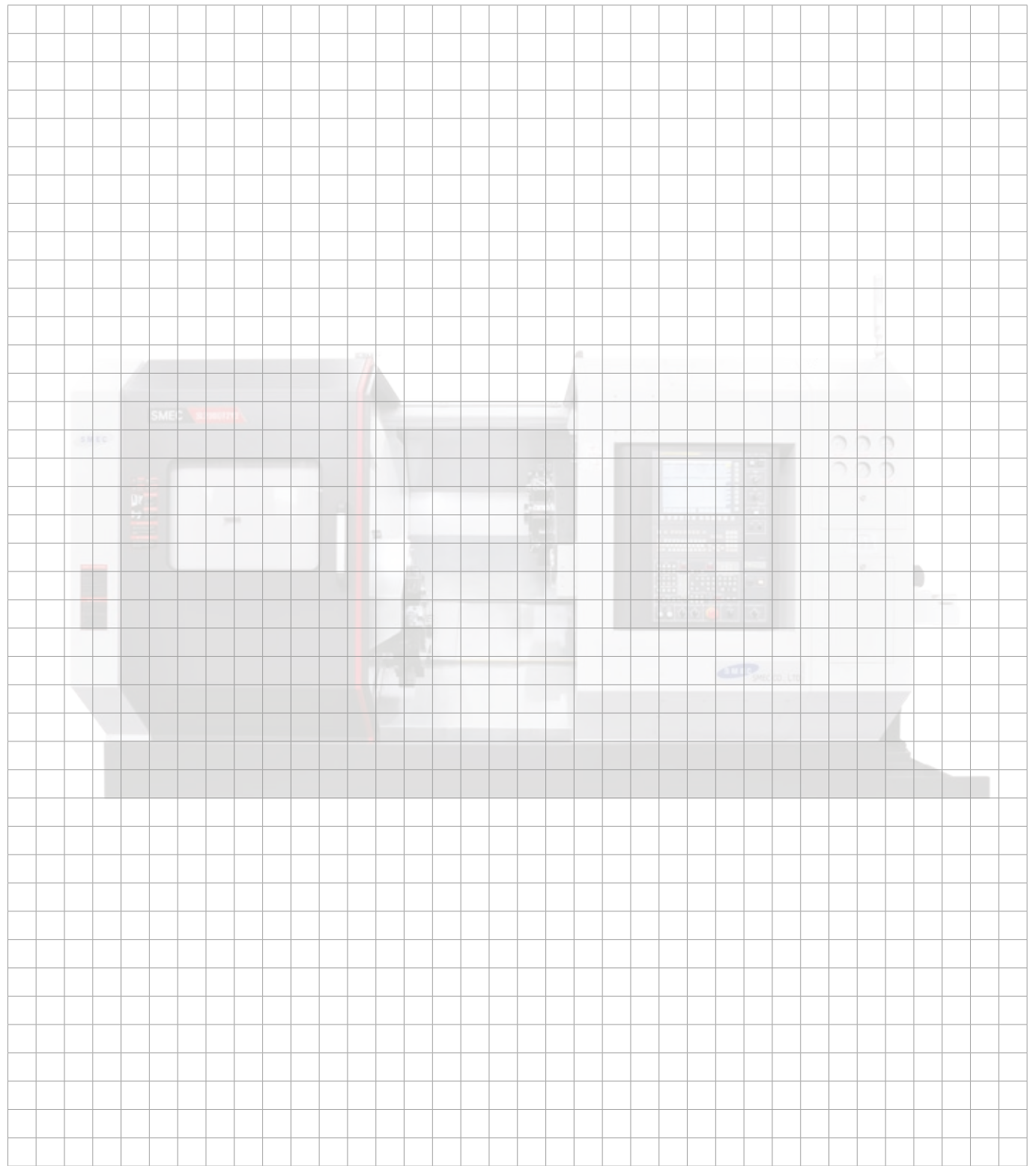
Robuste MultiTouch-Bedienung
kombiniert mit SideScreen

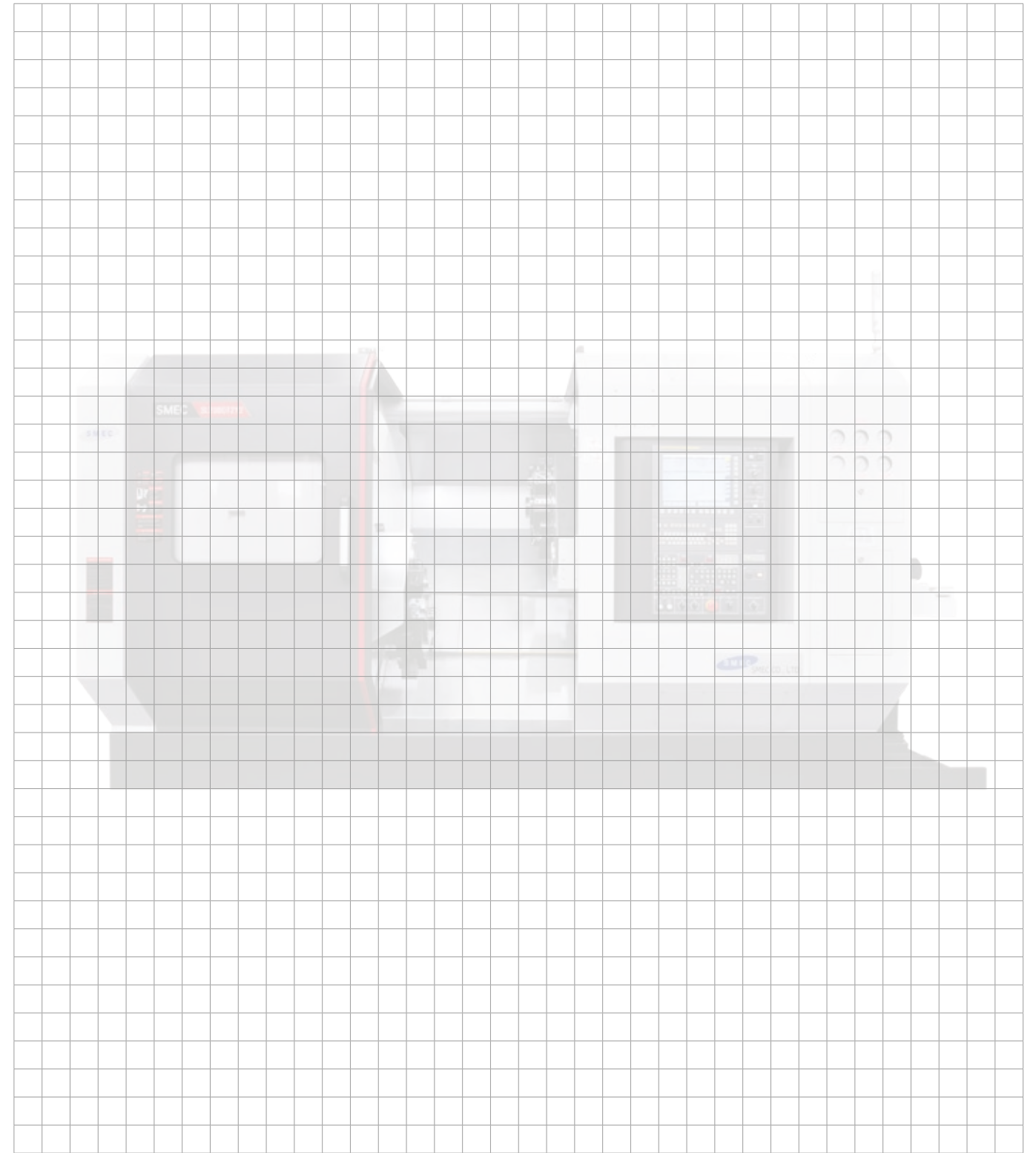
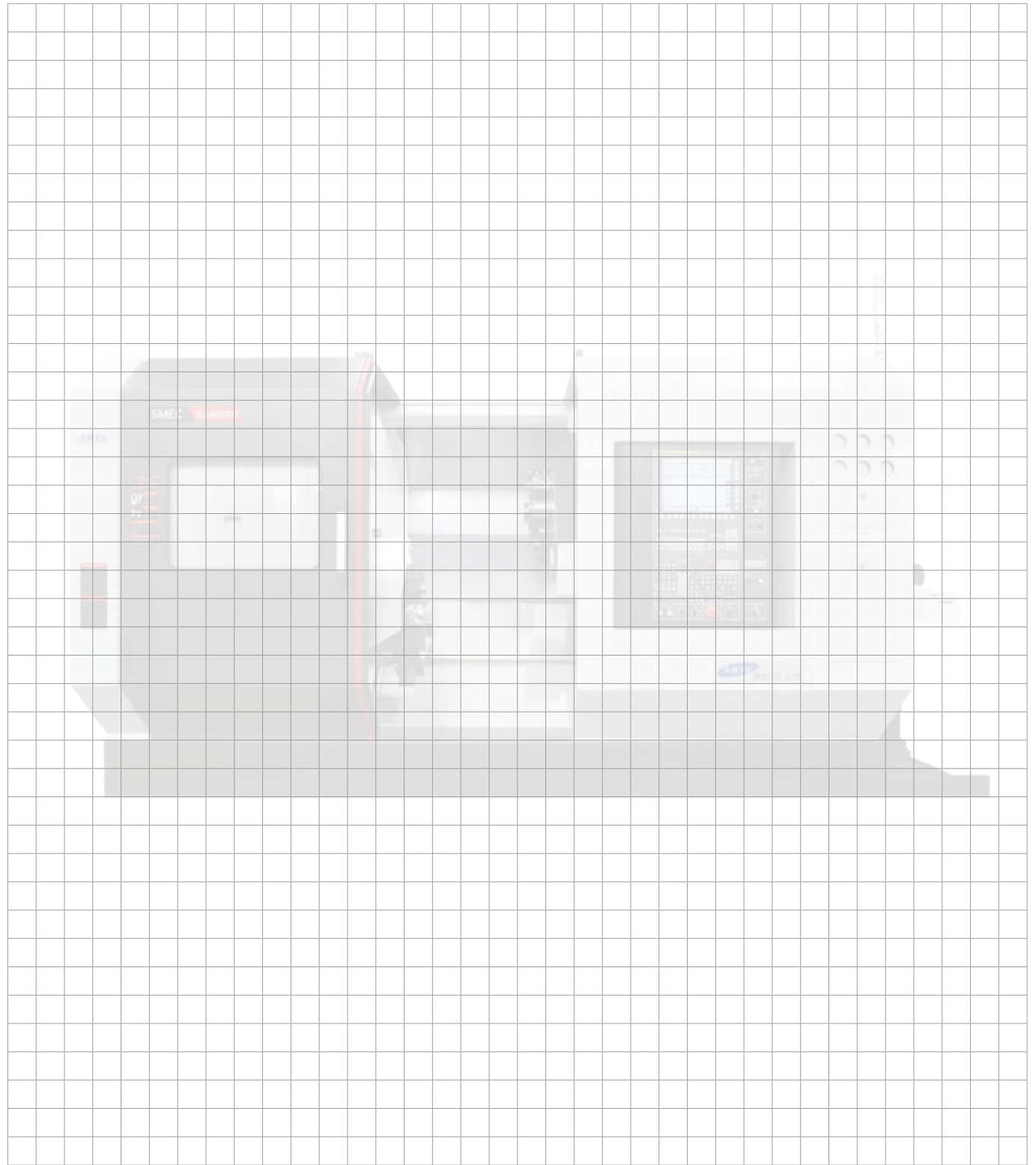
Für Werkstatt, Lohnfertigung und Großserienfertigung sind hochproduktive Automatisierungslösungen gefragt, die den Weg in die Digitalisierung begleiten.

Ob Einzelteil- oder Massenfertigung, einfache oder komplexe Werkstücke – die SINUMERIK CNC-Lösungen bieten Werkzeugmaschinenbetreibern immer die passende Lösung für ihre Anforderungen.

Durch die tägliche Nutzung von mobilen Geräten wie Smartphones, Tablets oder Computern haben wir eine bestimmte Art der Interaktion mit Maschinen entwickelt. Werkzeugmaschinen bilden hier keine Ausnahme mehr.

- Der Trend zu größeren Bildschirmen eröffnet die Möglichkeit, zusätzliche anpassbare Fenster in das HMI einzubinden.
- Änderung des Bildseitenverhältnis von 4:3 in 16:9.
- Zugleich stehen Lösungen bereit, mit denen die Benutzeroberfläche individuell an die Anforderungen der Kunden angepasst werden kann.
- So kann der Maschinenbediener wesentlich mehr Informationen parallel betrachten.





Gleich einspeichern und
ANGEBOT sichern!

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