

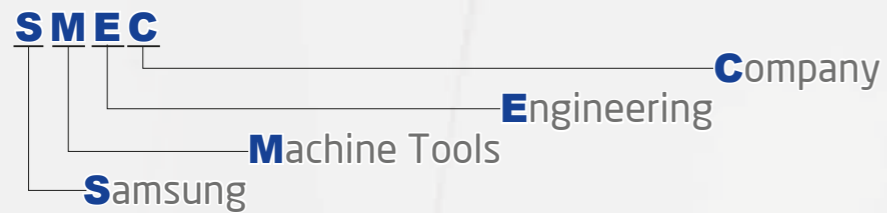
# SMEC

## SLV 500/500M (RH, LH)

VERTICAL 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



## SLV 500/500M

- A Type : Chuck Size 12"
- B Type : Chuck Size 15"
- C Type : Chuck Size 18"

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

- High speed, precision and high rigidity spindle
- Stable machine structure
- Significantly reduced non-cutting time and high productivity

## High Accuracy, High Rigidity Spindle

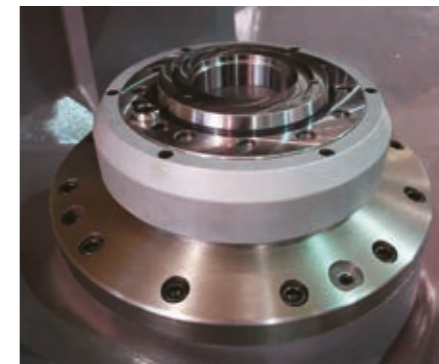
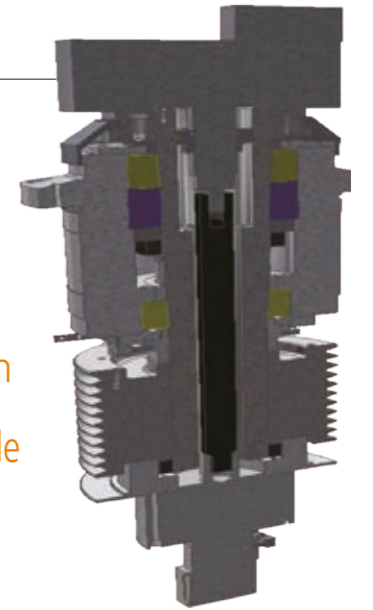
### Main Spindle Structure

High torque main spindle motor is supported by strong Double Cylindrical Roller bearings and Angular Thrust bearings which allow heavy duty cutting and minimize acceleration/deceleration times.

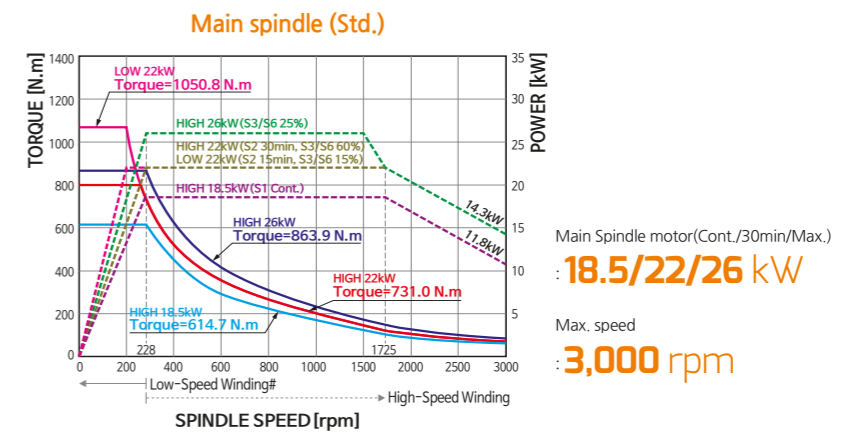
Spindle nose(ASA) : **A2-8**

Spindle bearing diameter(front) : **Ø130mm**

**A2-8, 12"(15")** chuck available



### Spindle Power & Torque Diagram



An innovative high precision, heavy duty CNC Lathe, integrated with all of **SMEC's** advanced technology - **SLV 500/500M**



Spindle speed  
**3,000 rpm (12")**  
**2,000 rpm (15"/18")**

Max. machining dia.  
**500 mm**

Max. machining length  
**465 mm**

Rapid traverse(X/Z)  
**20/20 m/min**

#### Highly Reliable and Rigid Structural Design

Ensure heavy duty and precision cutting with excellent structural design

#### SERVO TURRET



Indexing Time  
**0.18 sec(60Hz)**

Number of tool positions  
**12 stations**

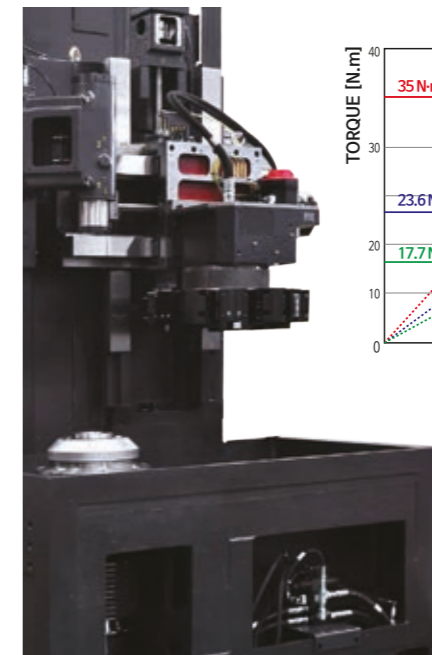
#### High Speed, Heavy Duty Servo Turret

Driven by a reliable high torque servo motor, the 12-station heavy-duty turret indexes nonstop, bi-directionally with a fast 0.18 second from station to station. Large diameter 3 pieces precision Curvic coupling with 44.3KN(9,959 lbs) of turret clamping force enables precision as well as heavy-duty cutting.

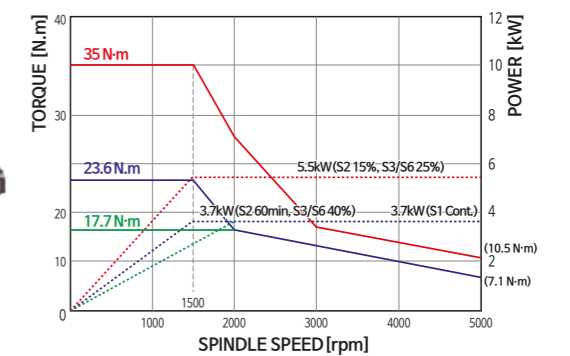
SLV500\_M is equipped with standard 12-station BMT65 turret, capable of accepting rotary tools at any station.

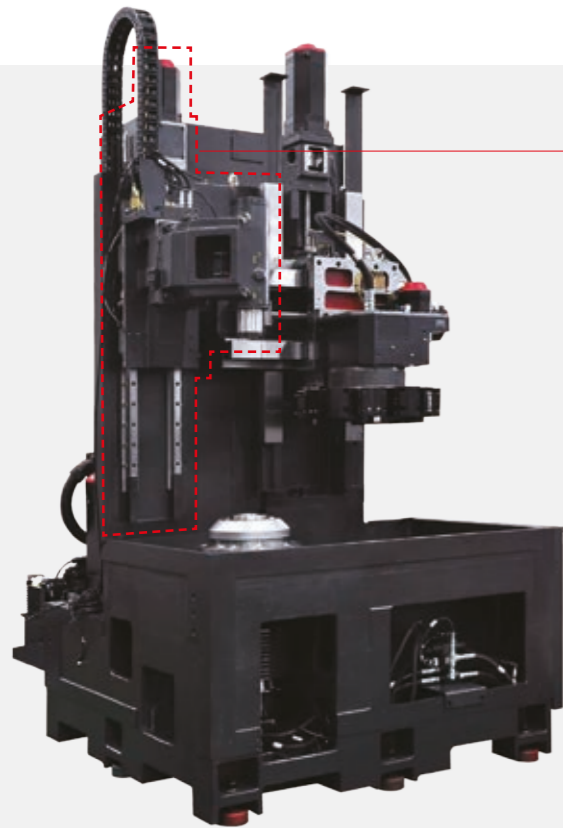
CLAMP FORCE

**44.3KN**



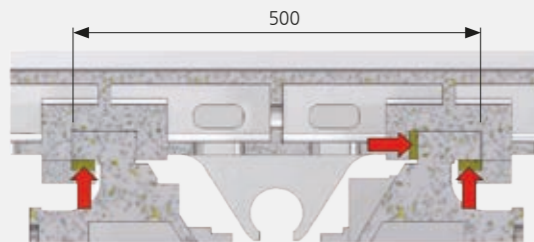
Milling Motor Torque Diagram





### Main Body Construction

The main body of SLV 500/500M is consisted of one piece meehanite cast iron bed, wide column, anti-heat displacement spindle and headstock, and integral Box way construction with anti-friction mating way surfaces that ensure unsurpassed long term rigidity and superior accuracy.

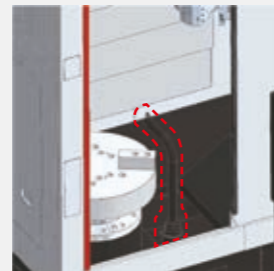


Three(3) adjustable Gibs on X and Z axis provide easier maintenance as well as long term rigidity and accuracy

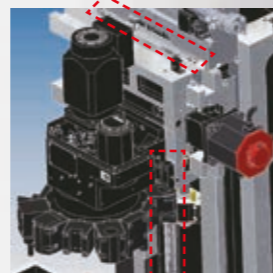
**Column Span : The largest in its class**  
**500mm**

### Servo Tailstock (Special Option)

- Tailstock Drive Mechanism : Servo Motor (1.6kW)
- Tailstock travel : 450mm
- Tail stock Diameter : Ø110
- Tail stock taper type : MT-5
- Quill Drive Mechanism : Hydraulic
- Quill travel : 80mm



### Tool Presetter (Special Option)



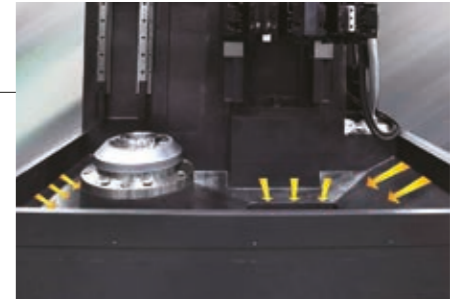
### X/Z Linear Scale (Special Option)

- Spec. : ±5µm



### Easy Chip Removal and High Volume Coolant System.

Large volume of flushing coolant allows minimal chip build-up, and slanted splash guard design effectively removes the chip out from the machine.



Motor

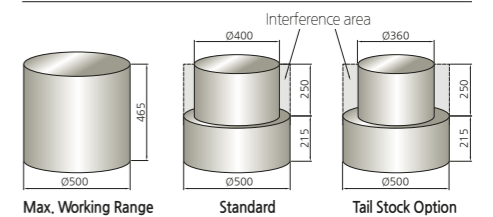
**1.1 kW**

Discharge Capacity

**165L/min[60Hz]**

### Working Range

Unit : mm



### Operator convenience pendant type control panel

- High-Speed and High Quality Machining
- Excellent Control Functions
- Focusing on Minimizing Downtime High Reliability and Easy Maintenance
- Operator convenient pendant type control panel

### 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.



### Reliable Lubrication Dispenser

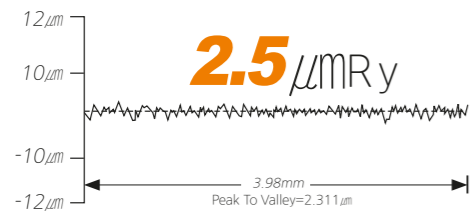
Lubrication pump adopted which is one of the most reliable brand and offers exact amount of oil on each face.

Capacity : **4 Liter**



### High Precision

#### Surface Roughness



Model : SLV 500

#### Roundness

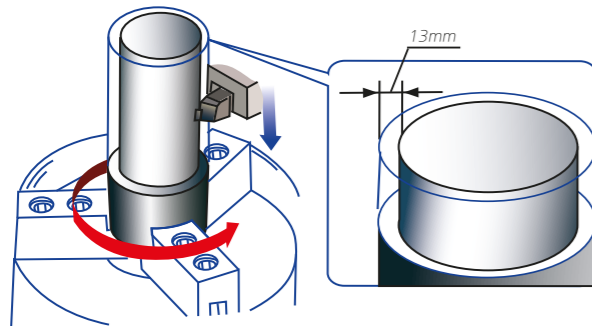


Cutting condition	
Tool	Diamond tool <nose radius 0.020 inch>
Material	AL150<Aluminum>
Cutting speed	198 m/min
Feedrate	0.05 mm/rev
Depth of cut	0.1 mm
Outer diameter	200 mm
Filter	1-50

### Processing Speed

#### Turning Performance (material:SM45C) SLV 500

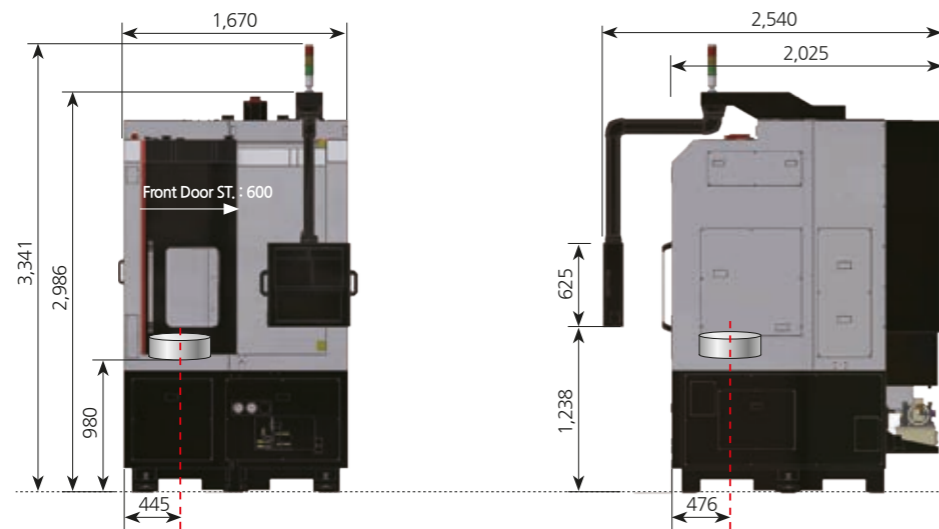
Heavy-duty cutting (O.D) <25mm×25mm qualified tool>



Spindle speed  
**357 rpm**  
Cutting speed  
**142 m/min**  
Depth of cut  
**13 mm <Spindle Load 65%>**  
Feedrate  
**0.3 mm/rev**

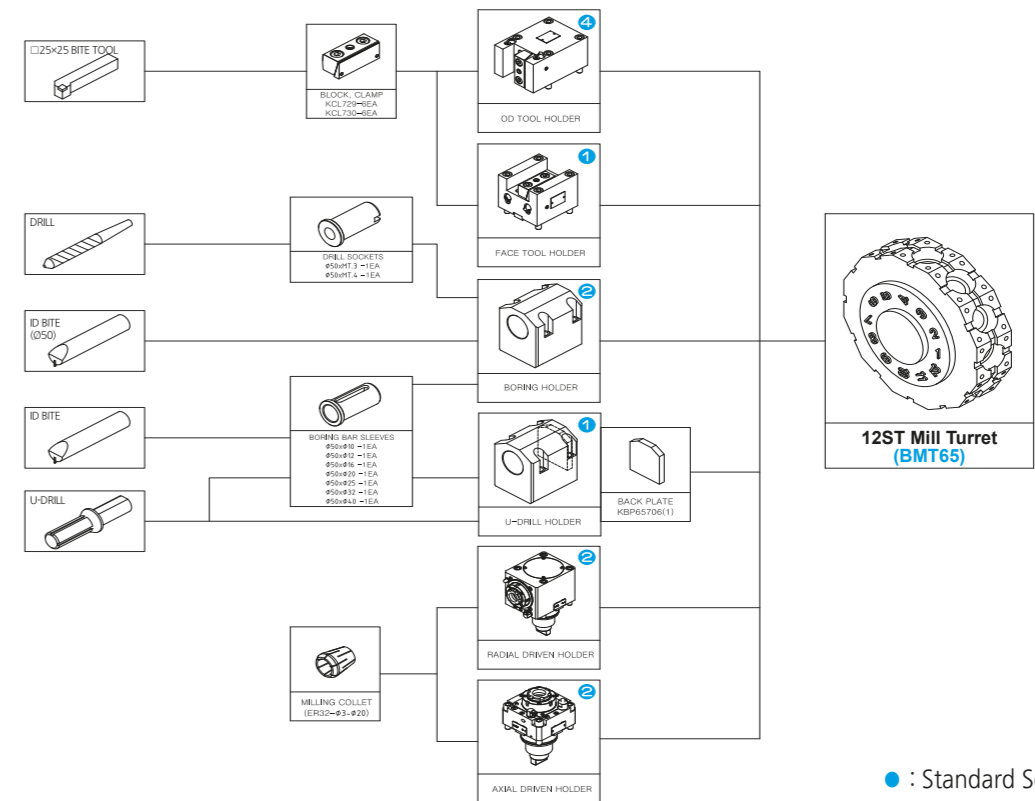
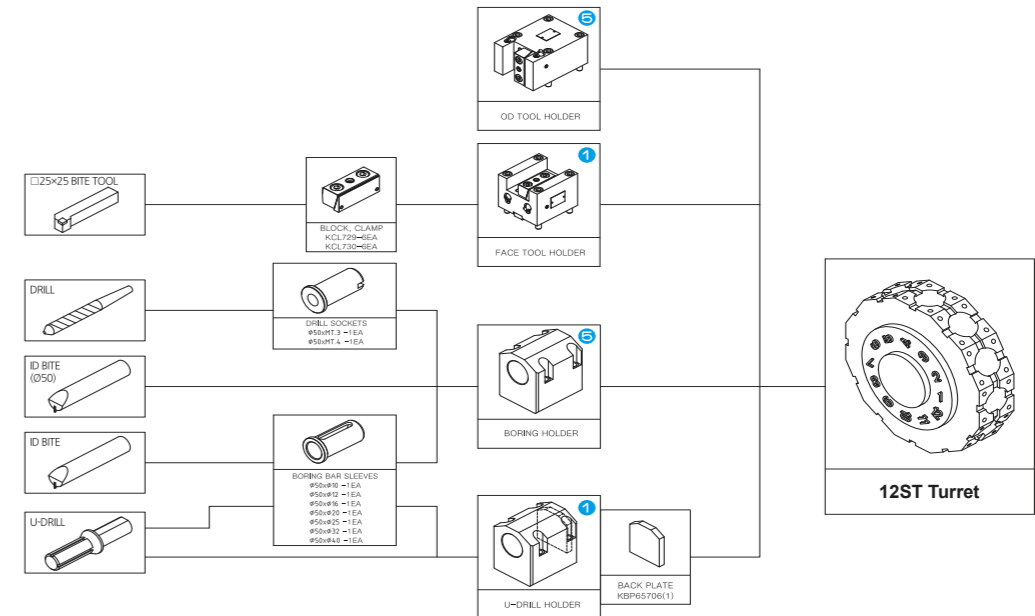
### Machine Dimensions

Unit : mm



### Tool Holders & Sleeves

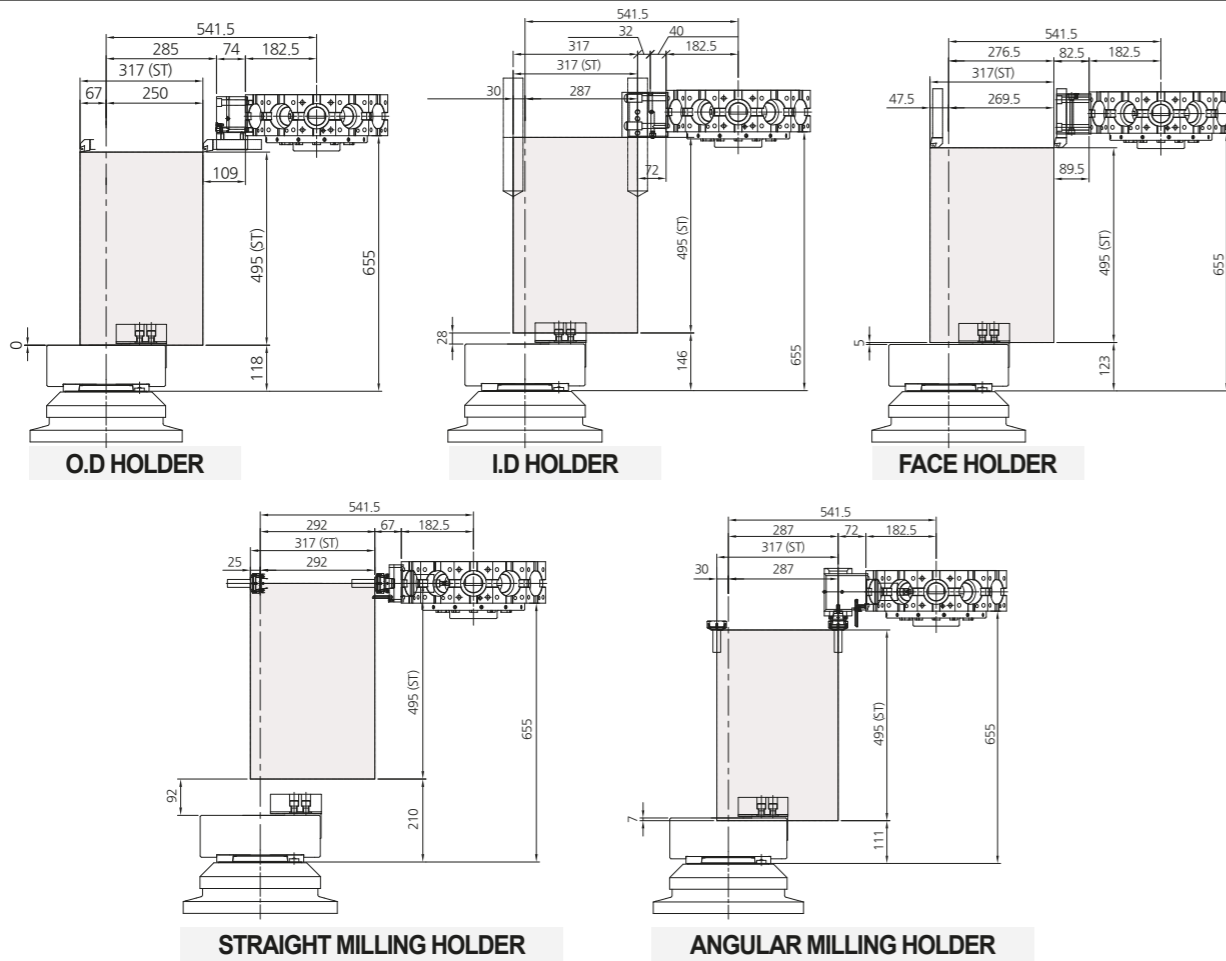
Unit : mm



● : Standard Set Numbers

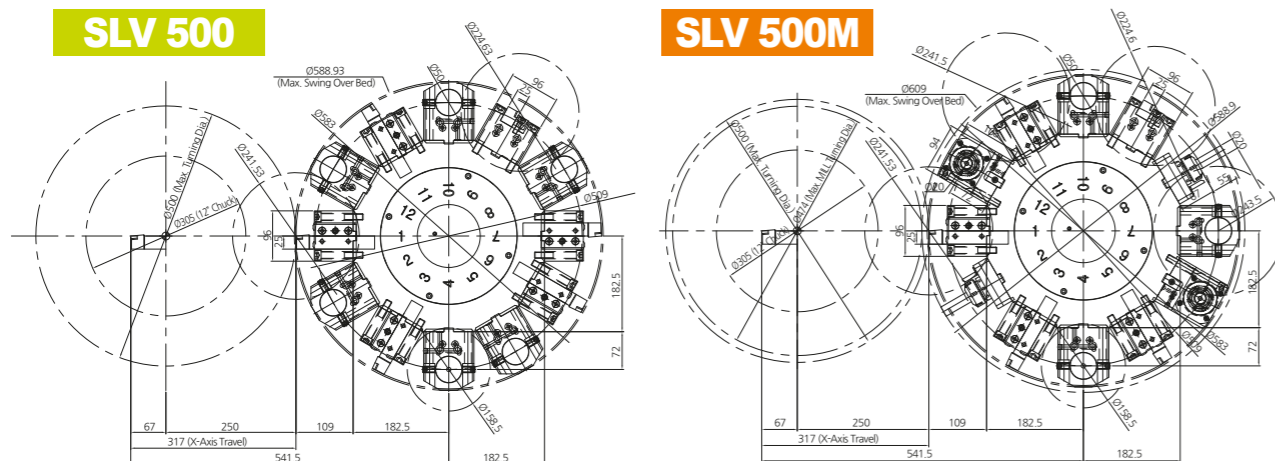
### Work Range

Unit : mm



### Turret Interference

Unit : mm



### Major Specifications

DESCRIPTION	SLV 500 RH/LH			SLV 500M RH/LH				
	A type	B type	C type	A type	B type	C type		
Chuck	Chuck size	inch	12"	15"	18"	12"	15"	18"
Capacity	Swing over bed	mm	700	700	700	700	700	700
	Swing over cross slide (with Tailstock)	mm	400(360)	400(360)	400(360)	400(360)	400(360)	400(360)
	Max. turning diameter	mm	500	500	500	500	500	500
	Max. milling diameter	mm	-	-	-	474	474	474
	Max. machining length	mm	465	465	465	465	465	465
Spindle	Spindle speed	rpm	3,000	2,000	2,000	3,000	2,000	2,000
	Spindle nose	ASA	A2-8	A2-8	A2-8	A2-8	A2-8	A2-8
	Draw tube ID	mm	-	-	-	-	-	-
	Spindle bore diameter	mm	60	60	60	60	60	60
	Spindle motor (Cont./Max)	kW	18.5/26	18.5/26	18.5/26	18.5/26	18.5/26	18.5/26
Travels	X-axis travel	mm	317	317	317	317	317	317
	Z-axis travel	mm	495	495	495	495	495	495
	X-axis Rapid traverse rate	m/min	20	20	20	20	20	20
	Z-axis Rapid traverse rate	m/min	20	20	20	20	20	20
Turret	Number of tool stations	ea	12	12	12	12(BMT65)	12(BMT65)	12(BMT65)
	Turning tool shank size	mm	25	25	25	25	25	25
	Boring bar diameter	mm	50	50	50	50	50	50
	Turret index time(next station swivel time)	sec	0.18	0.18	0.18	0.18	0.18	0.18
	Rotary tool speed	rpm	-	-	-	5,000	5,000	5,000
	Rotary tool motor (Cont./Max)	kW	-	-	-	3.7/5.5	3.7/5.5	3.7/5.5
Tailstock	Quill diameter	mm	[110]	[110]	[110]	[110]	[110]	[110]
	Quill stroke	mm	[450]	[450]	[450]	[450]	[450]	[450]
	Spindle taper	MT	[MT5]	[MT5]	[MT5]	[MT5]	[MT5]	[MT5]
Machine	Size (with Side Chip conveyor) LxWxH	mm	1,670(2,750) × 2,540 × 3,341			1,670(2,750) × 2,540 × 3,341		
	Size (with Rear Chip conveyor) LxWxH	mm	1,670 × 2,540(4,080) × 3,341			1,670 × 2,540(4,080) × 3,341		
	weight	kg	7,100	7,100	7,100	7,200	7,200	7,200
	Coolant tank capacity	Liter	250			250		
Electric power supply	kVA/V	40/220	40/220	40/220	45/220	45/220	45/220	
Controller		FANUC						

\* Design and specifications subject to change without notice.

[ ] : Option

### Standard Accessories

- 12" hollow 3 jaws chuck (A Type)
- 15" hollow 3 jaws chuck (B Type)
- 18" hollow 3 jaws chuck (C Type)
- 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
- Shower coolant unit
- Spindle orientation
- 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
- Coolant pressure switch
- Counter (total, multi, tool, work)
- Dual pressure chucking
- Linear scale (X, Z)
- Oil mist collector
- Oil skimmer
- Robot interface
- Special chuck
- Tailstock (servo)
- Tool presetter (removable)
- Transformer



## Fanuc Manual Guide i

### Erstellen Sie Ihre Teileprogramme in nur wenigen Schritten

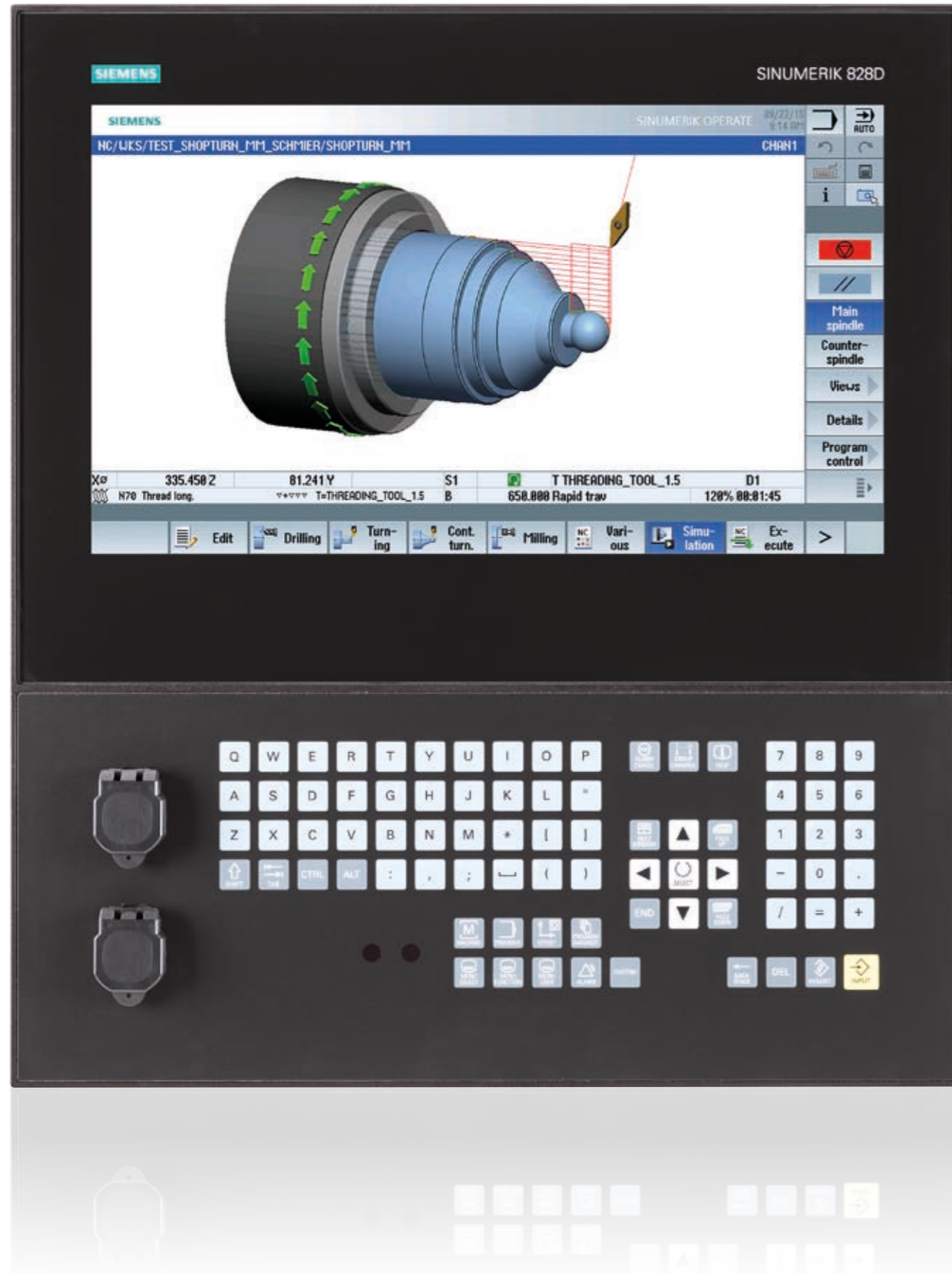
Reduzieren Sie den Zeitaufwand bei der Überführung Ihrer Zeichnungen in die Produktion:  
Mit dem FANUC MANUAL GUIDE i lassen sich sowohl einfache als auch hoch komplizierte Maschinenzyklen inklusive Dreh-, Fräs-, Bohr- und Messzyklen schnell und einfach umsetzen. Dabei unterstützt die Software Sie durch 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

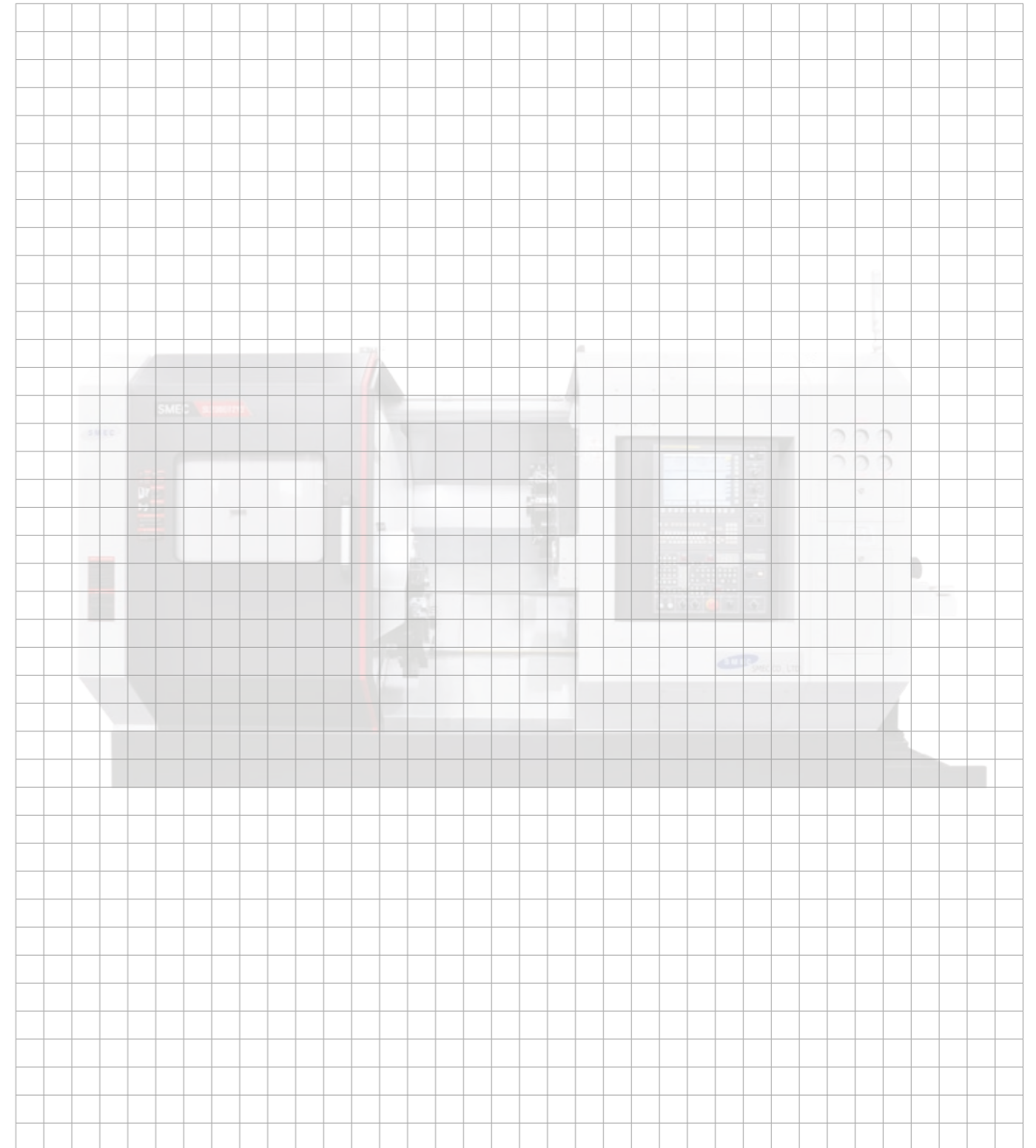
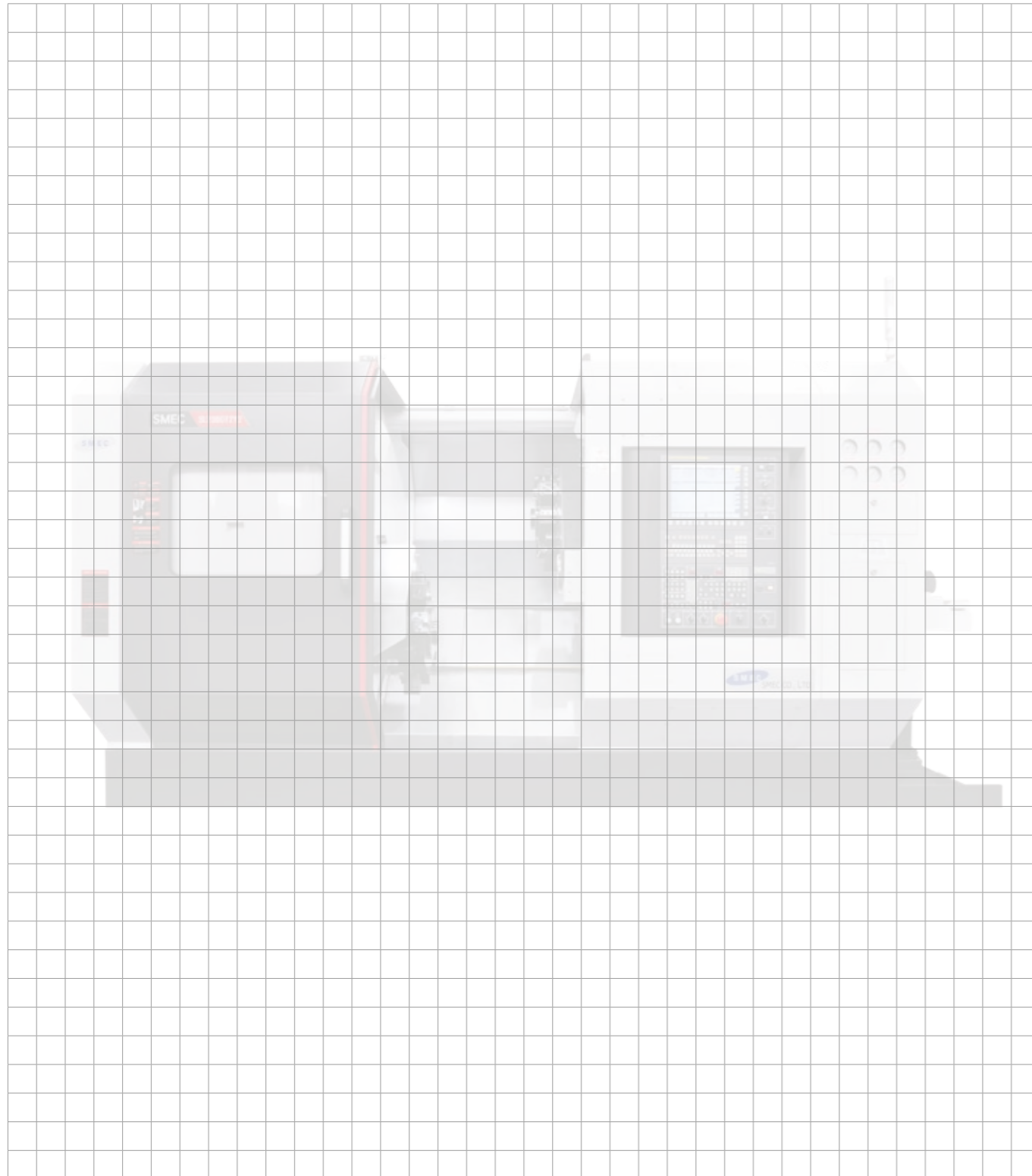
Für Werkstatt, Lohnfertigung und Großserienfertigung sind hochproduktive Automatisierungslösungen gefragt, die den Weg in die Digitalisierung begleiten.

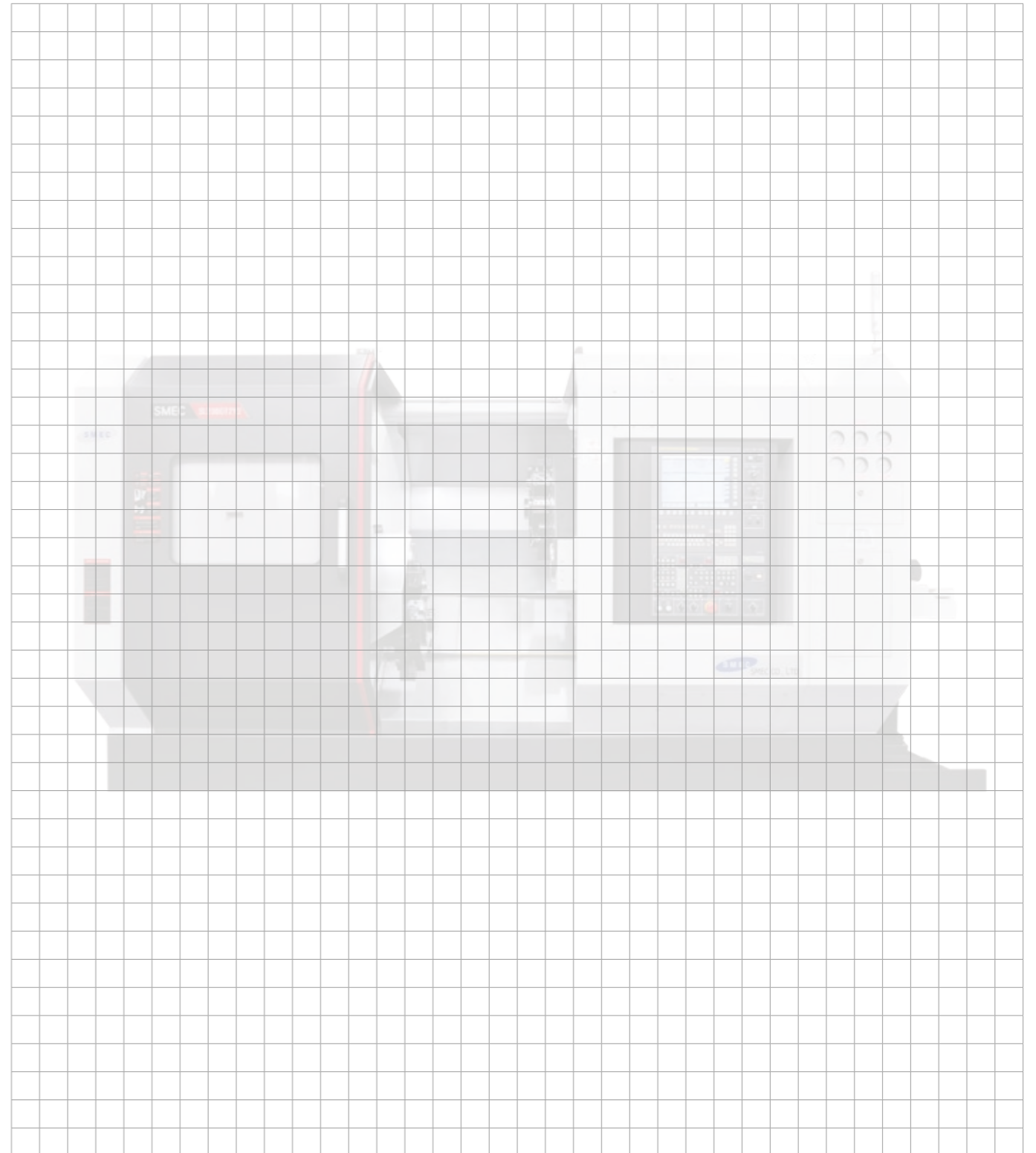
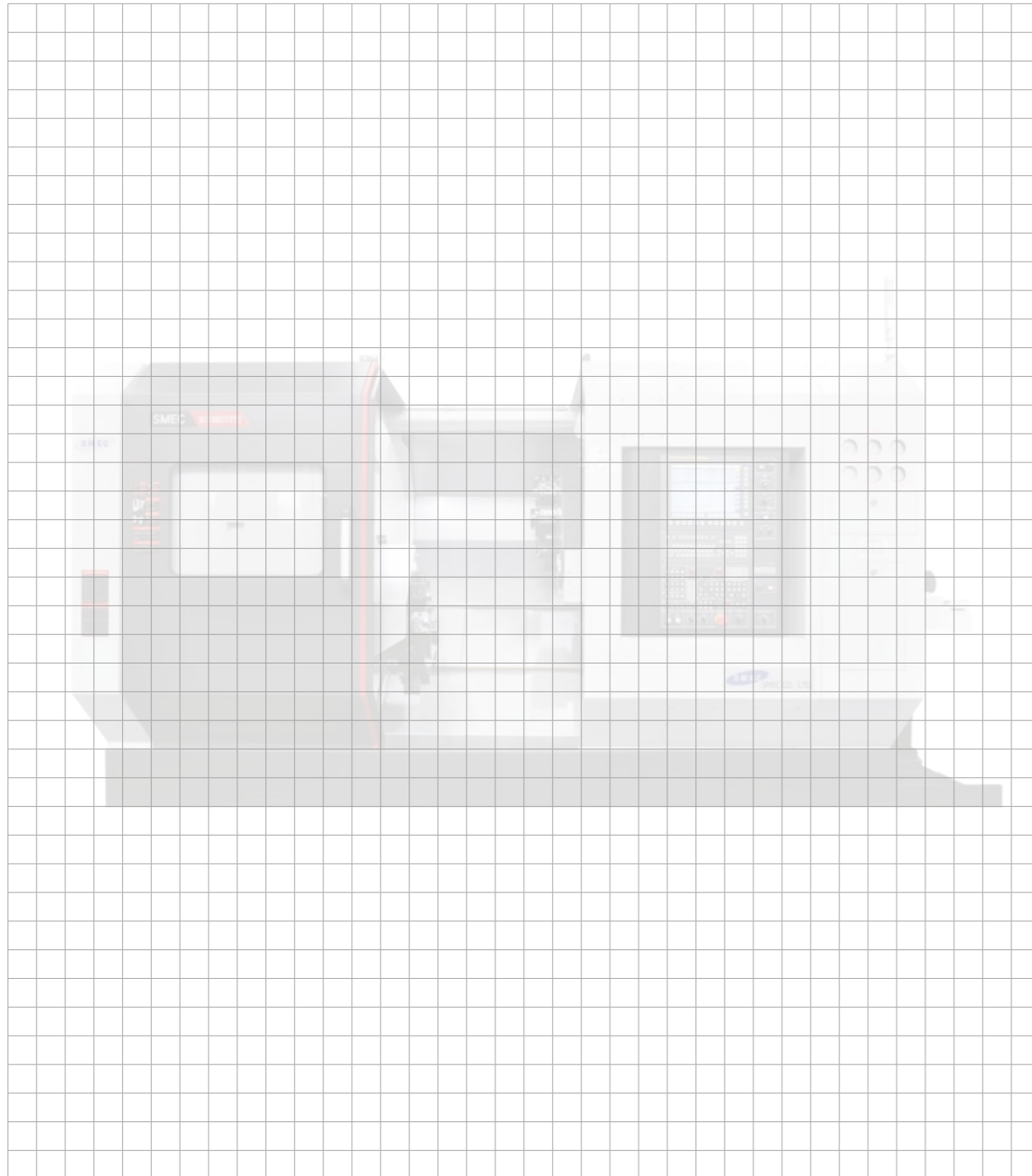
Ob Einzelteil- oder Massenfertigung, einfache oder komplexe Werkstücke – die SINUMERIK CNC-Lösungen bieten Werkzeugmaschinenbetreibern immer die passende Lösung für ihre Anforderungen.

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.







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**Deutschland  
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