PRODUCTION SOLUTION **TURN X MILL**

ST500 TXM / ST500 TXMS

TURNING + MILLING MACHINE
COMPLETE COMPLEX PARTS
IN ONE PACE

SMT SWEDISH MACHINE TOOL COMPANY AB

smtcompany.se

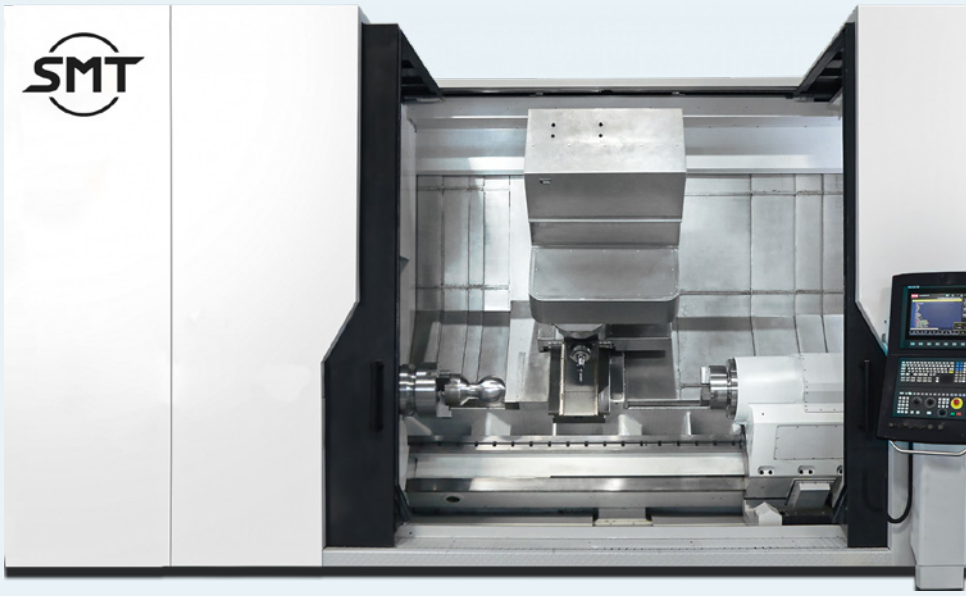
TURNXMILL

EFFICIENT SINGLE-SETUP MACHINING

Our milling spindle was introduced as a option in the early 2000s, leading into developing our TURNXMILL series to meet the growing demand for efficient, single-setup machining.

Based on the proven SwedTurn legacy, its modular design combines flexibility with the high precision required in advanced manufacturing.

The TURNXMILL maintains core features our customers trust: a solid, thermally stable bed, reliable continuous operation, and exceptional repeatability in high-volume production.



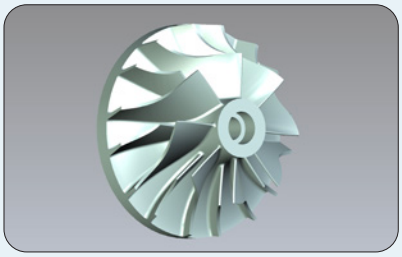
> UP TO 4,5 MORE EFFECTIVE PRODUCTION

The multifunctional TXM500 and TXM800 turning-boring-milling centers enable complete single-setup machining of complex components, with swing diameters up to 750 mm and lengths up to 2350 mm. These advanced machines combine turning and milling functions in one solution, supporting a wide range of operations—including threading, drilling, boring, milling, gear hobbing, grinding, and in-process measuring.

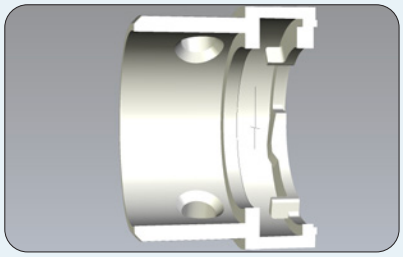
A 18/27/30 kW milling spindle with integrated motor and top-mounted tool magazine ensures fast tool changes and space efficiency. The sub-spindle, available with 30/39 kW or 44/49 kW, can be equipped with custom chuck systems.

With the ability to handle workpieces up to Ø700x3500 / Ø800x3400 mm, plus C-axis operation and a front tool turret, the TXM series delivers precise, heavy-duty machining in a single setup. Standard control is Siemens Sinumerik One with Fanuc and Fagor available as an option.

MACHINING POSSIBILITIES TECHNOLOGY DIVERSITY

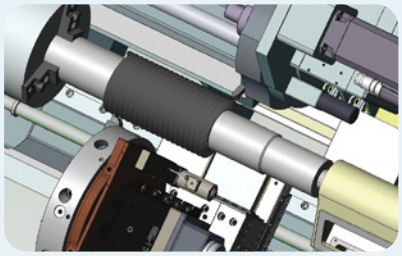


5-AXIS MACHINING

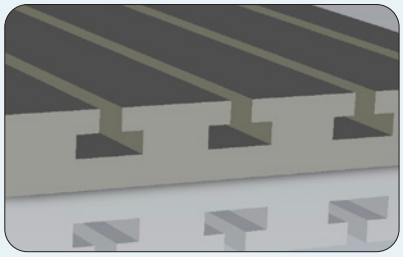


I.D. TURNING, THREADING, GROOVING

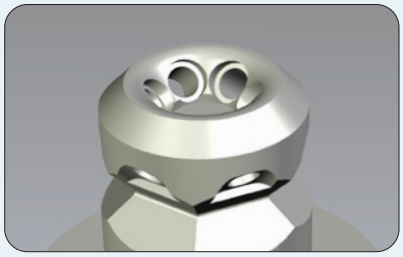
O.D. TURNING, THREADING, GROOVING



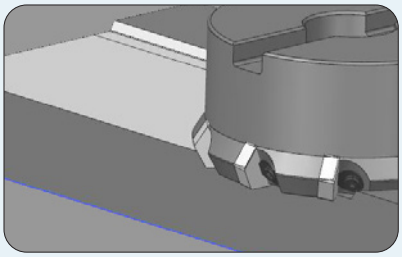
PARALLEL SHAFT TURNING



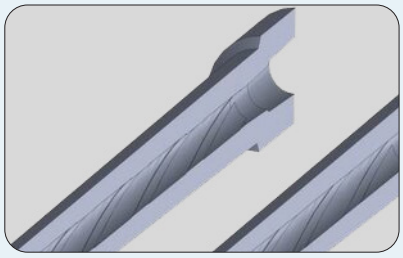
SLOTTING



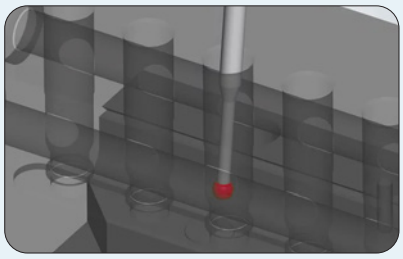
ANGULAR DRILLING



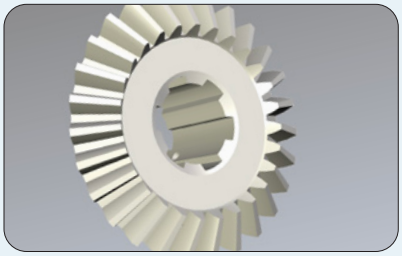
FACE MILLING & GROOVING



DEEP HOLE DRILLING

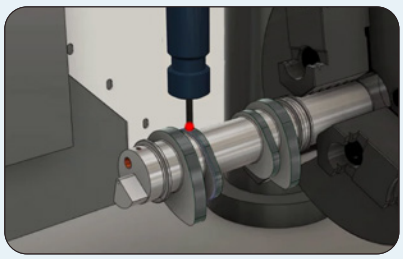


DEBURRING

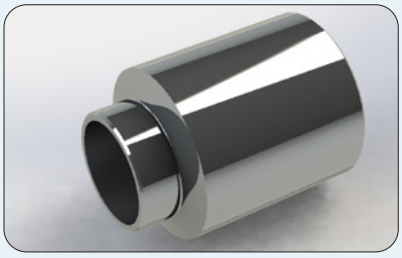


GEAR HOBBING AND TOOTH MILLING

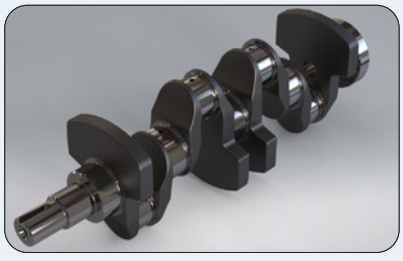
B-AXIS TURNING



IN-PROCESS MEASURING WORKPIECE AND TOOL



HARD TURNING



TURNING+MILLING ORTOGONAL&ECCENTRIC

UNLOCKING POTENTIAL
Machining with a wide range of applications unlocks opportunities for innovation, improved efficiency, and scalable growth.

PRECISION CONCEPT

THE FOUNDATION FOR PRECISION WITH THE TECHNOLOGY FOR THE FUTURE.

Our TURNXMILL-machines are developed with a deep understanding of machining fundamentals and a clear vision for modern production demands. Combining decades of experience with state-of-the-art technology, we deliver reliable, high-performance solutions for complex and heavy-duty machining. From robust construction to intelligent chip management, every detail is designed to ensure long-term precision, efficiency, and adaptability in a rapidly evolving industry.

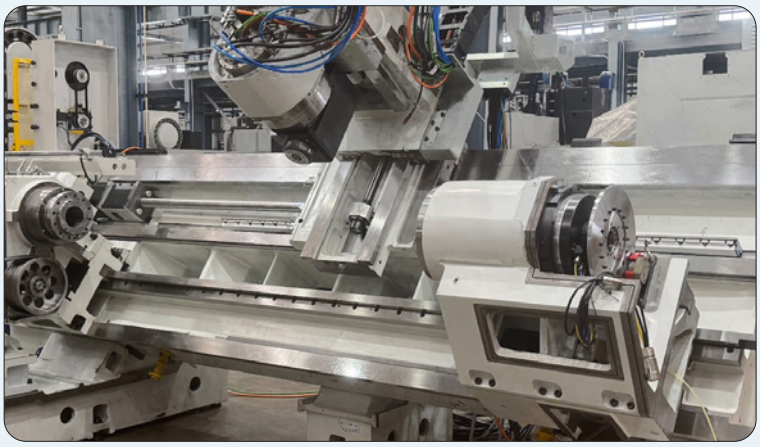
> THE FOUNDATION: OUR RELIABLE, STEADY MACHINE BED

Our well-proven, stable machine construction with high-quality steel castings provides the foundation for heavy-duty, high-precision machining. The robust design ensures durability, dimensional stability, and consistent performance even under extreme cutting forces and long machining cycles, with an exceptionally long service life before major mechanical overhauls are required.

The sturdy gray cast-iron inclined bed, engineered with a 60° slant, offers outstanding structural rigidity. Its innovative axis geometry allows for exceptionally wide guideway spacing and minimizes the distance between the machining area and the guideways. This optimised layout not only improves stability and vibration damping but also enhances the overall machining accuracy, especially during heavy or interrupted cuts.

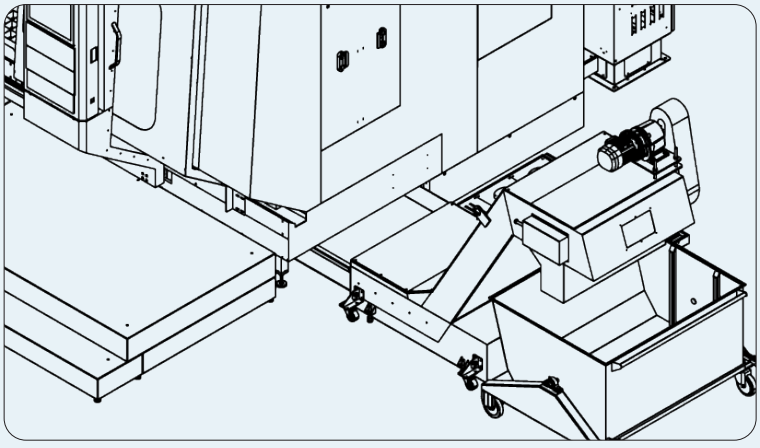
All linear axes in both the upper and lower slide systems are fitted with generously dimensioned anti-friction guideways, delivering maximum load-bearing capacity and ensuring smooth, wear-resistant motion. These components are designed to maintain long-term precision and reliability, even in demanding production environments. Combined with an efficient chip evacuation system and a compact slide design, the machine supports both productivity and ease of maintenance.

> SOLID ENGINEERING



The engineering of our TURNXMILL series is the result of decades of machine design expertise combined with the latest technological advancements. With deep-rooted knowledge in chip removal, we focus on precision, efficiency, and reliability. This combination defines the core strengths of our machines and ensures consistent high performance in demanding production environments.

> CLEAN MACHINE FOR EFFICIENT MACHINING



A clean machine is key to maintaining productivity and precision essential for uninterrupted machining. Our chip conveyor system is designed for high efficiency and can be tailored to handle the predominant chip type—whether from milling or turning operations. It features integrated separation of chips and cutting fluids, promoting both machine cleanliness and environmentally responsible waste handling.

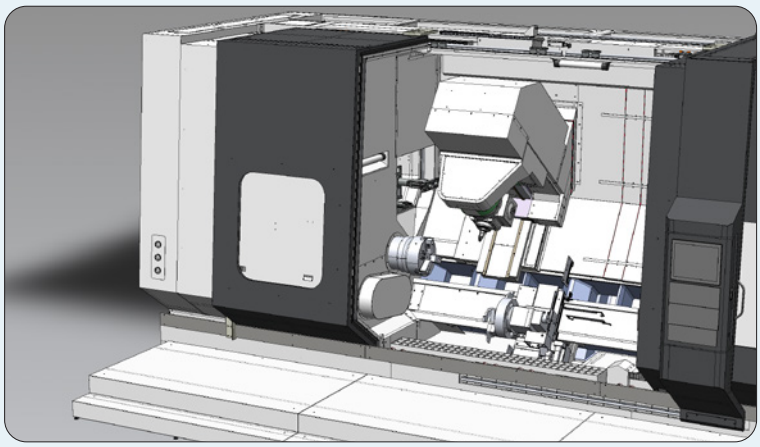
> RELIABLE MACHINING THROUGH CHANGE

Some things haven't changed in the last 200 years—chips still need to be removed—but the ways in which tooling engages with the workpiece, how systems move, and how automation is applied have evolved dramatically. This is a reliable machine designed for machining complex and heavy workpieces, offering production solutions that remain robust through technological shifts and changing market demands.

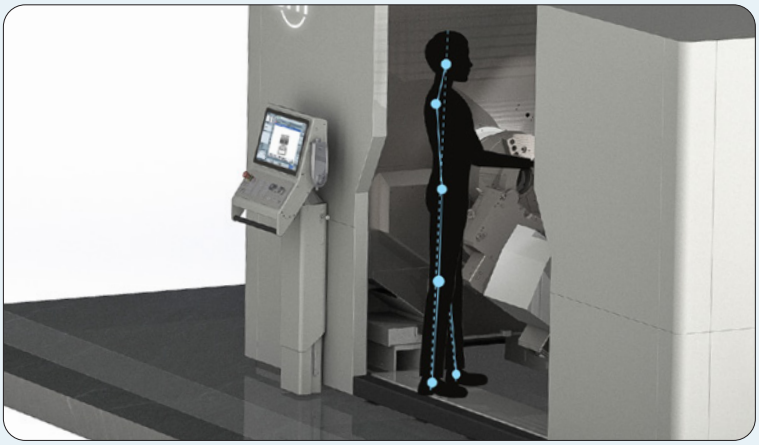
ERGONOMIC CONCEPT

SEAMLESS COLLABORATION BETWEEN ROBOT LOADING AND HUMAN OPERATORS

Our machine design emphasizes the synergy between automation and human interaction. By combining efficient robot loading systems with operator-friendly access, we ensure smooth workflows, increased productivity, and safe handling throughout the machining process.



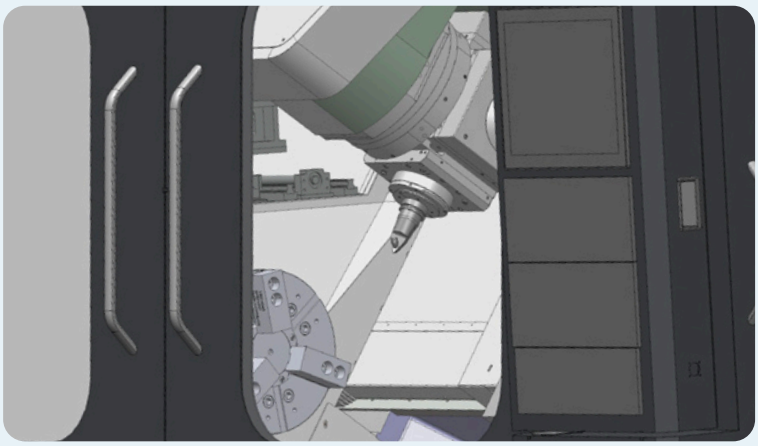
> ERGONOMIC WORKING POSITIONS



The wide step and vertically opening doors provide the operator with easy, intuitive access to the machine. This enhances ergonomics by enabling comfortable standing positions and unrestricted entry.

Manual tasks such as loading workpieces, checking measurements, or handling tools, whether from the top or side are now even more accessible and less physically demanding.

> CLEAR VISUAL MONITORING

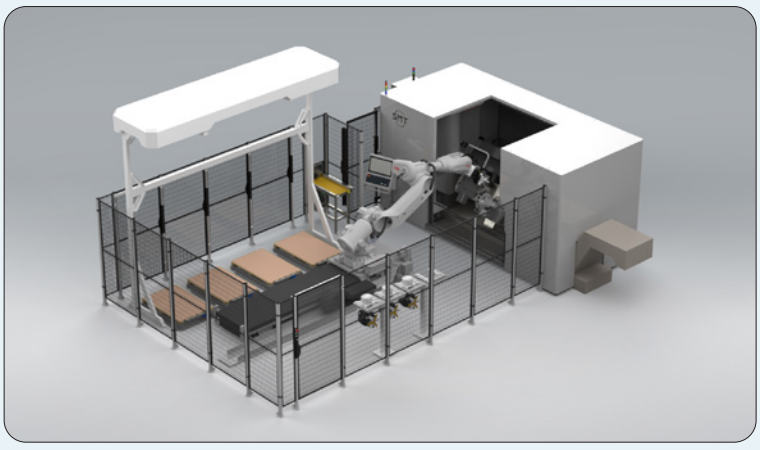


While nearly every aspect of machining can be digitally monitored, direct visual access to the process remains invaluable.

Generously sized windows provide the operator with a clear, unobstructed view of the entire production area, enhancing control and situational awareness.

Integrated LED lighting ensures excellent visibility of the workpiece during operation.

> EASY IMPLEMENT IN PRODUCTION CELLS



Developed in close cooperation with SMT's long-term robotics partner, the improved integration concept enables flexible implementation in automated production cells.

Multiple interface options and adaptable configurations are available to meet specific customer requirements. Making the transition to automated or hybrid workflows simpler and more efficient.

> SAFE MACHINING OPERATIONS

For safety reasons, the chuck is limited to low-speed movement along the X-axis when the door is open. Full-speed machining and all active operations are only permitted when the doors are securely closed, ensuring operator safety at all times.

CONTROL SYSTEMS

YOUR CHOICE OF CONTROL SYSTEM, TAILORED TO YOUR PREFERENCES – FROM SIMULATION TO REALITY.

> SIEMENS SINUMERIK ONE

> ”Top speed + top surface” deliver high quality contours at faster speeds on complex surfaces. The SIMATIC S7-1500F PLC speeds up cycle times and delivers faster hardware responses, Cutting tool changes and other PLC-related tasks is executed with greater efficiency.

> Supports turning, milling, multitasking, and other manufacturing processes in one system.

> High resolution multi-touch panels, powerride override controls for faster and better run-in. mobile control via the portable HT 10 terminal.

> OPC UA 3.0 enables fast and secure data exchange in industrial environments.

> FANUC 31II-B5 PLUS

> Complex multi-axis operations with Full interpolation between all axes and 6-axis transformation. The FANUC 31II-B5 PLUS ensure high precision, surface quality, and short cycle times, with fast block lookahead and built in kinematic measurement for easy setup.

> Smart and simple interface for user friendly operation, custom iHMI screens simplify advanced machine setup.

> Machine status monitoring, program transfer tool, smart servo control, fine surface technology are some of the functions creating efficient all-in-one machining.

> FAGOR CNC 8065 ELITE M

> Supports 8-axis machinig, 5-axis RTCP, and multi-spindle and -magazine setups.

> Advanced control with modern algorithms enable complex, high-precision machining.

> Control loops with Sercos III and real-time protocols allow nanometer-level accuracy.

> The design is space-efficient and user friendly with versatile monitor and keyboard options.

> The Web-Based HMIelite enables easy programming and cross-platform compatibility

> SIEMENS DIGITAL TWIN

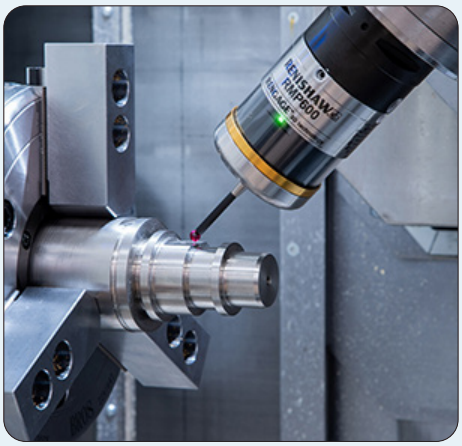
With SinuTrain and Run MyVirtual Machine, all milling–turning and turning–milling capabilities are available offline, directly within the CNC job planning environment.

> Set up CNC job planning without the need for an immediate investment in a CAD/CAM system or specialized expertise.

> Assign machine operators flexibly, allowing them to contribute directly to job planning.

> Benefit from seamless CNC programming that connects the shop-floor machine with its digital twin in planning.

> ADVANCED MEASURING TECHNOLOGY



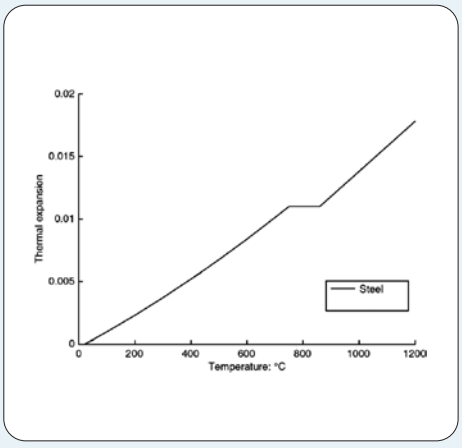
Renishaw RPM600

The TURNXMILL can be equipped with high-precision measuring probes. In combination with the linear direct measuring systems, and backlash free anti-friction guideways, the probes effectively transforming it into a fully capable 3D measuring machine.

> Leverage modular measuring software
Use the comprehensive modular measuring software provided to design intelligent measurement strategies that minimize error-causing factors from the beginning.

> Customize complex measuring processes, and safeguard geometric quality of workpieces in your machine. Take advantage of software solutions tailored for complex, user-specific measurement tasks, ensuring both accuracy and flexibility.

> AUTOMATIC COMPENSATION



> Automatic compensate for tool wear:
The system records and compensates for tool wear automatically, maintaining precision throughout production. (you need the probing system above)

> Apply temperature compensation
Use software-controlled temperature compensation to counteract machining errors caused by thermal expansion of the machine and workpieces.

TURNX**MILL PROGRAM** TECHNICAL DETAILS

Technical Data	Unit	ST500 TXM	ST500 TXMS
WORK AREA			
Swing over bed	mm	750	750
Machine length: Distance between spindle noses	mm	1500, 2500, 3500, 5500	1500, 2500, 3500, 5500
Maximum turning diameter	mm	650	650
Max. part length	mm	1350, 2350, 3350, 5350	1350, 2350, 3350, 5350
Max. bar-stock diameter	mm	90	90
TRAVEL			
Traverse path X1	mm	740	740
Traverse path Z1	mm	2500	2500
Traverse path Y1	mm	±200	±200
Traverse path counter spindleZ2	mm	-	2300
MAIN SPINDLE			
Speed range (infinitely variable) *depending on chuck size*	rpm	25-2500	25-2500
Maximum torque	Nm	2350	2350
Spindle nose DIN 55026	Type	A2-11	A2-11
Spindle bearing (inside diameter)	mm	170	170
Spindle bore (excluding draw-back rod)	mm	110	110
Chuck size	mm	400	400
COUNTER SPINDLE			
Speed range (infinitely variable) *depending on chuck size*	rpm	-	30-2500
Maximum torque	Nm	-	300
Spindle nose DIN 55026	Type	-	A2-8
Spindle bearing (inside diameter)	mm	-	140
Chuck size	mm	-	315
TAILSTOCK			
Quill diameter	mm	120	-
Quill travel	mm	125	-
Adjustable quill force	KN	3.5-31	-
Live centre	MT	5	-
C-AXES			
Resolution	Deg	0,001°	0,001°
Rapid traverse	rpm	8	8
C-axis torque	Nm	36500	36500
DRIVE POWER			
Main spindle (AC integrated-spindle motor)	Kw	37	37
Counter spindle (AC integrated-spindle motor)	Kw	-	29

TECHNICAL DATA FOR STANDARD MODELS.

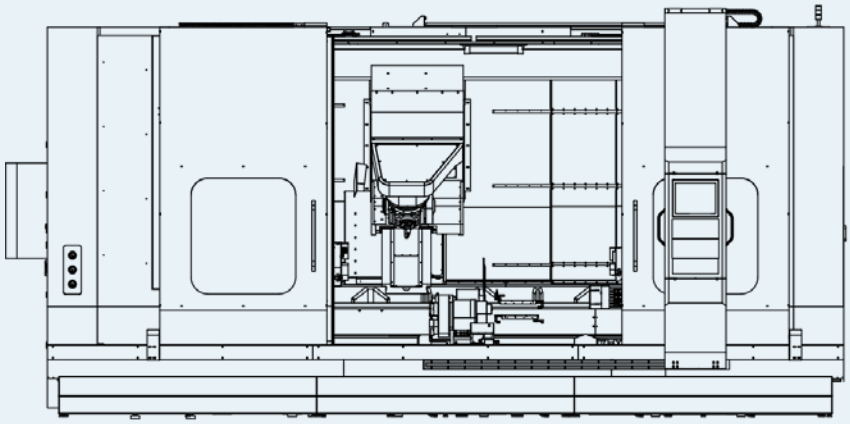
TURNX**MILL PROGRAM** TECHNICAL DETAILS

MILLING SPINDLE - POWERMILL		Sauter	Sauter
Speed range	rpm	0-12000	0-5500
Maximum torque	Nm	120	300/450
Maximum Drive power	Kw	36,6	28/36,6
Type of tool shank	Type	HSK-T63 (or Capto C6)	HSK-100 (or Capto C6)
B-AXIS			
Travel range	Deg	±120	±120
Holding torque of clamp	Nm	3600	3600
Interpolating drive torque	Nm	400	400
TOOL MAGAZINE			
Tool storage capacity	Nos	40 pcs	200 pcs
Max. tool diameter	mm	Ø80	Ø120
Max. tool length	mm	300	600
Max. tool weight	Kg	8	20
FEED DRIVE			
Rapid speed X1	m/min	20	20
Rapid speed Z1	m/min	20	20
Rapid speed Y1	m/min	10	10
Feed Torque Motor X1	Nm	41	41
Feed Torque Motor Z1	Nm	52	52
Feed Torque Motor Y1	Nm	23	23
COOLANT SYSTEM			
Tank capacity	Lit	250 L	1000 L
Coolant pumps for the tool systems	l/min	83l/min	83l/min
High pressure coolant	bar	8	50
Pump power	Kw	0,55kW / 8bar	0,55kW / 8bar
POWER CONSUMPTION			
Connected load	KVA	3x400V 125Amp	3x400V 125Amp
Compressed air	bar	5	5
DIMENSIONS			
Height of center above floor	mm	1550	1550
Overall height	mm	2900	2900
Required space L x D (without chip conveyor)	mm	7200 x 2600	7200 x 2600
Total weight	Kg	22 000	22 000
CONTROL SYSTEM			
CNC Package	Model	Siemens ONE	Siemens ONE
		Fanuc 31ii-B5 Plus	Fanuc 31ii-B5 Plus
		Fagor 8065 Elite	Fagor 8065 Elite

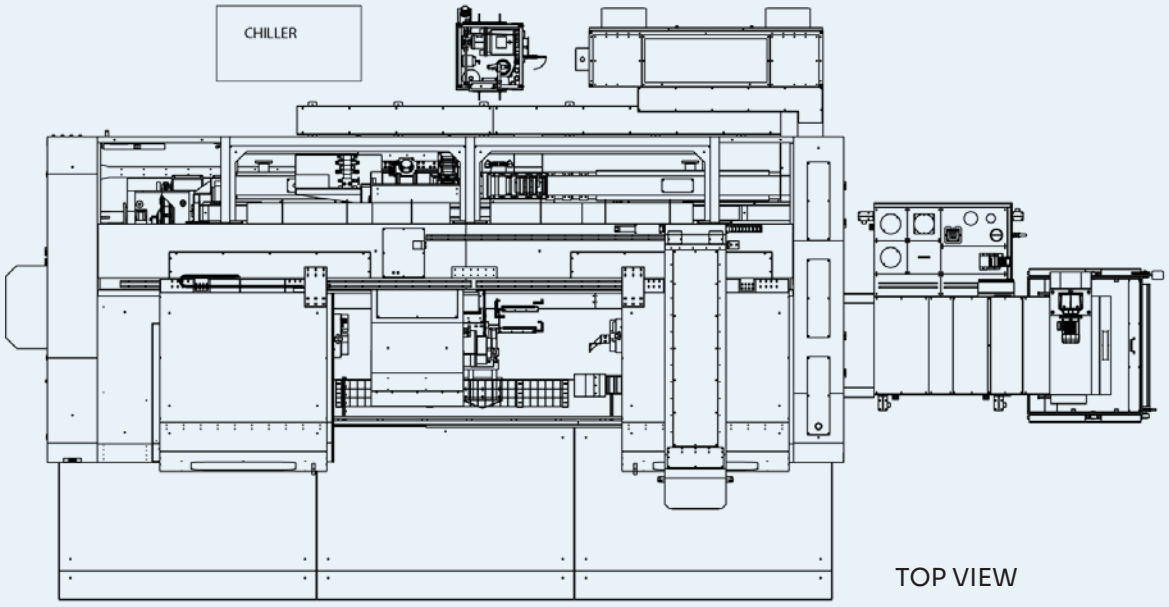
TECHNICAL DATA FOR STANDARD MODELS.

TURNXMILL ST500 TXM

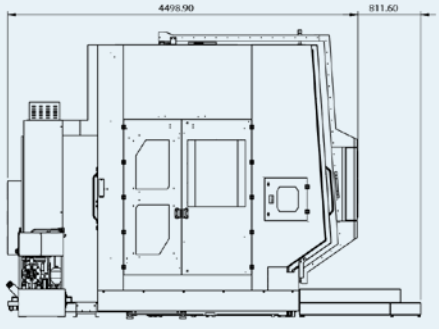
Multi-tasking turning/milling machining center

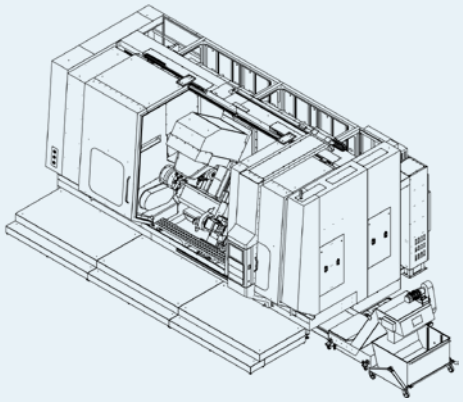


FRONT VIEW



TOP VIEW





TURNX**MILL OPTIONS** TECHNICAL DETAILS

Extra Swing 100mm - Extended	X	X	X
Extra Swing 300mm - Extended	X	X	X
Extended X-axis travel: XXXmm	X	X	X
Extended Y-axis travel: 600mm	X	X	X
3-jaw Chuck 315mm SMW	-	-	-
3-jaw Chuck 400mm SMW			
3-jaw Chuck 500mm SMW	X	X	X
3-jaw Chuck 630mm SMW	X	X	X
Dubbla chucktryck	X	X	X
Spindle DIN55026/A15 (Spindle diam. In fron bearing / Bore)	260 / 180 mm	260 / 180 mm	260 / 180 mm
C-Axis on separate Servomotor (Pos. accuracy 0.001°/1620 Nm)	X	X	X
High pressure coolant 70 bar	X	X	X
Coolant through spindle	X	X	X
Milling spindle unit Capto C5	-	-	-
Milling spindle unit Capto C6	X	X	X
Milling spindle thermal stabilization system	X	X	X
Heavy duty Tailstock	X	X	X
Automatic doors	X	X	X
Tool probe - automatic	X	X	X
Work piece probe Blum - ATC	X	X	X
Steady rest SMW 20 - 160 mm	X	X	X
Steady rest SMW 45 - 245 mm	X	X	X
Steady rest SMW 80 - 310 mm	X	X	X
Tool package HSK 63	X	X	X
Tool package Capto C6	X	X	X
Part catcher	X	-	-
Robot Interface	X	X	X
Lineat Scales Z+Y+B+C	X		
Air Gun	X		
Coolant Gun	X		
Oil separator Absolent ODF 2000	X		
Tool Probe	X	X	X
Chip conveyor	X	X	X

X = AVAILABLE
- = NOT AVAILABLE

TURNX**MILL MILLING UNITS** OPTIONS

MILLING UNIT / B-AXIS SVIVEL HEAD SMT HSK63 / 14KW / 7500 RPM		
Rear standard tool carrier, HSK63 (or Capto C5*)		
Milling rpm range	rpm	50 - 7500
Milling spindle power	kw	14
Milling torque	Nm	30
Milling spindle positioning accuracy	Degrees	0,001
Milling spindle locking torque	Nm	3500
Angular measuring transducer		Drive clique
B-Axis positioning range	Degrees	(+/-) 90/90
B-Axis positioning torque	Nm	1500
B-Axis locking torque	Nm	3500
B-Axis positioning accuracy	Degrees	0,001
Angular measuring transducer		Driveclique

MILLING UNIT / B-AXIS SVIVEL HEAD SMT HSK63 / 14KW / 9000 RPM		
Rear standard tool carrier, HSK63 (or Capto C5*)		
Milling rpm range	rpm	50 - 9000
Milling spindle power	kw	14
Milling torque	Nm	30
Milling spindle positioning accuracy	Degrees	0,001
Milling spindle locking torque	Nm	3500
Angular measuring transducer		Drive clique
B-Axis positioning range	Degrees	(+/-) 90/90
B-Axis positioning torque	Nm	1500
B-Axis locking torque	Nm	3500
B-Axis positioning accuracy	Degrees	0,001
Angular measuring transducer		Driveclique

MILLING UNIT / B-AXIS SVIVEL HEAD SAUTER HSK100 / 9000 RPM		
Rear standard tool carrier HSK100:		
Milling rpm range	rpm	50 - 9000
Milling spindle power	kw	50
Milling torque nom./max.	Nm	289/430
Milling spindle positioning accuracy	Degrees	0,001
Milling spindle locking torque	Nm	3500
Angular measuring transducer		Driveclique
B-Axis positioning range	Degrees	(+/-) 120/-120
B-Axis positioning torque	Nm	1350
B-Axis locking torque	Nm	3600
B-Axis positioning accuracy	Degrees	0,001
Angular measuring transducer		Driveclique

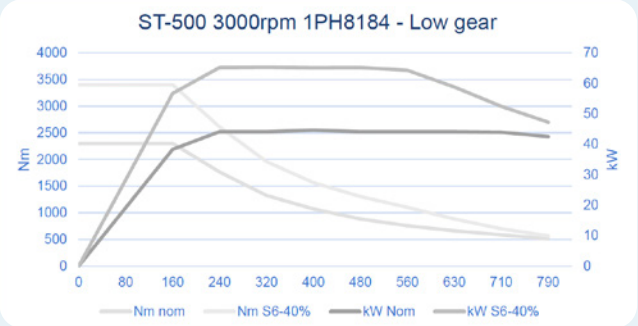
TURNX**MILL PROGRAM** MAIN SPINDEL DRIVE

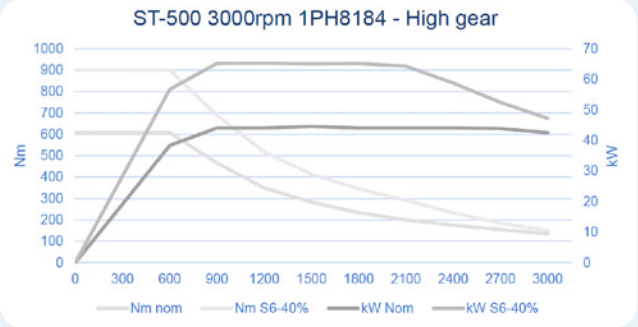
MAIN SPINDLE A11 170 MM
WITH MAX 3000 RPM
1PH8-184

Headstock with integrated gearbox

Power: 44 kW continuous drive
65 kW 40 % intermittent drive

Ratio between motor-spindle
high gear 1,68:1
low gear 6,27:1



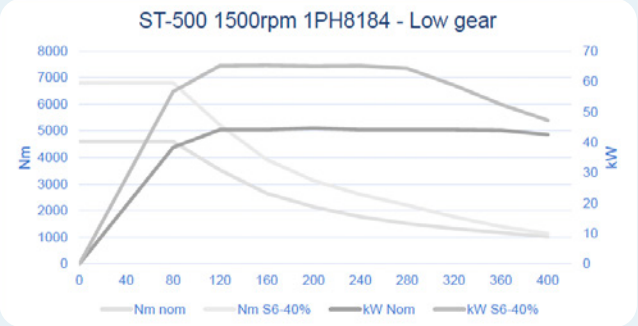


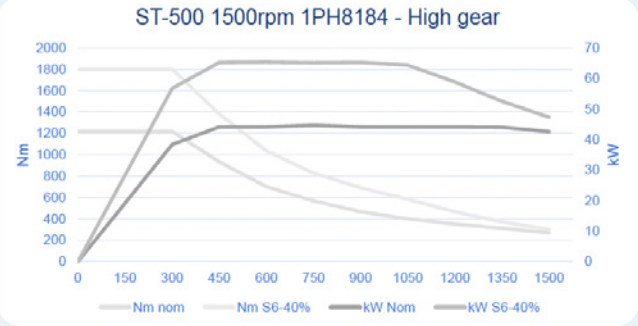
MAIN SPINDLE A11 170 MM
WITH MAX 1500 RPM
1PH8-184

Headstock with integrated gearbox

Power: 44 kW continuous drive
65 kW 40 % intermittent drive

Ratio between motor-spindle
high gear 3,34:1
low gear 12,55:1





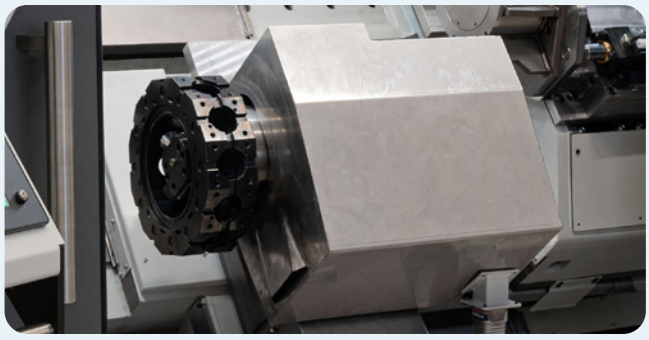
FRONT TURRET

Front standard turret with a disc turret for rotating tools

According to DIN 69880, diam. 60 mm. Sauter type 0.5.473.532 with the same technical data.

Tool positions for 6 stationary and 6 driven tools

Max power	12.7 kW.
Max torque	100 Nm
Max spindle speed	2250 rpm



PRODUCTION SOLUTIONS THAT LAST,
OVER TIME AND THROUGH CHANGE

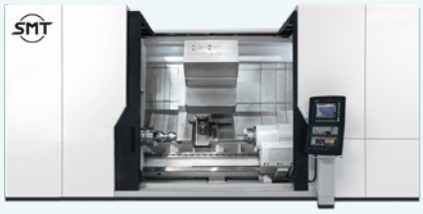
SMT MACHINE PROGRAMS

ALL MEASUREMENTS = MM

SWEDTURN X

Heavy duty CNC-lathes for non-stop production with high demands on precision

	MAX TURNING Ø	MAX WORKPIECE LENGHT
ST300	500	1300
ST500	500	900-3850
ST700	700	900-3850
ST1200	1200	800



TURN X MILL

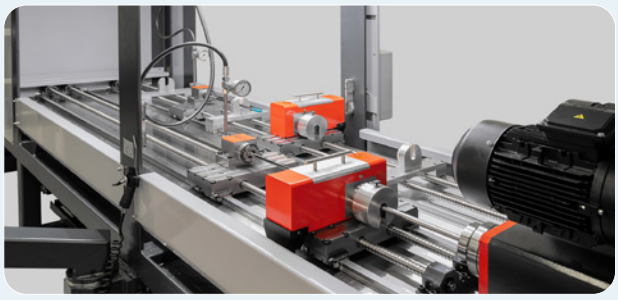
Heavy duty multifunction center for completing complex parts in one pace with Milling head and B-Axis

	MAX TURNING Ø	MAX WORKPIECE LENGHT
TXM 500 *S	650	1350/1500 - 5350/5500
TXM 800 *S	750	1350/1500 - 5350/5500

SWEDMILL

Vertical/horisontal milling machines for prototype and low volume production.

	WORKPIECE AREA	X	Y	Z
VHF 330 M		600	500	450
VHF 330 TI		600	500	450
VHF 360 TI		650	500	475
VHF 380 TI		800	500	475



SWEDDRILL

Deep hole drilling machines built on customer specification with max workpiece lenght up to 14 000mm.

	MAX TURNING Ø	FULL BORE
DHB 150	300	100
DHB 180	345	125
DHB 230	430	125

CONTACT

HEADQUARTER & PRODUCTION SITE

SMT Swedish Machine Tool Company AB
Främmestadvägen 29
465 97 Främmestad
Sweden

Phone +46 (0)21 - 80 51 00
Sales sales@smtcompany.se
Service service@smtcompany.se