

# KELLENBERGER TM300

Turn-Mill Center



**KELLENBERGER**

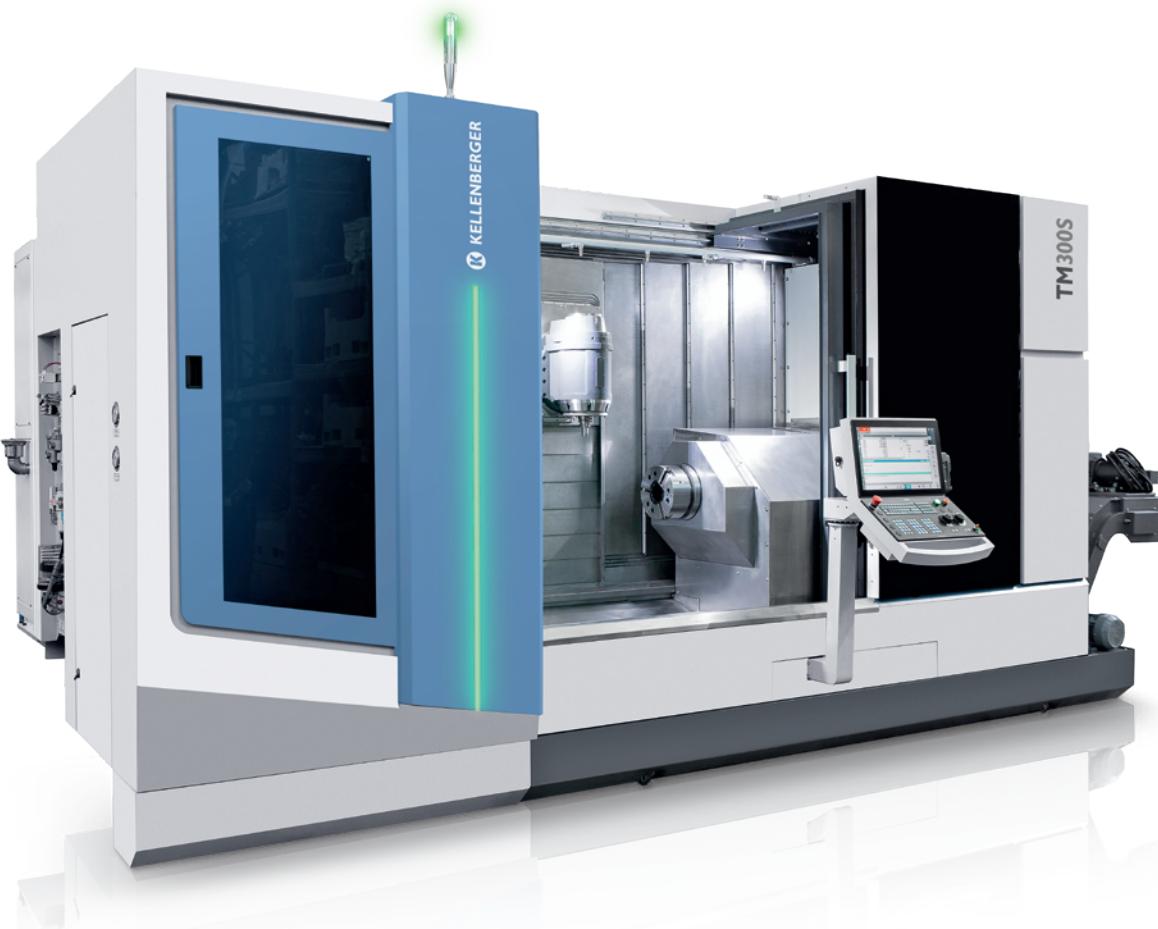
# KELLENBERGER TM300

Turn-Mill Center

## Integrated Turn-Mill Technology

Powerful and versatile:

The machine is ideal for industries such as precision engineering, aerospace, mechanical engineering, medical technology, and many more.



### The TM300 is available in 3 configurations

- TM300 (base version): with turning spindle and servo tailstock MT5.
- TM300S: with main spindle and counter spindle for complete machining of workpieces.
- TM300ST: with turning spindle, sub-spindle, and lower turret for 6-sided machining of workpieces with complex geometries.

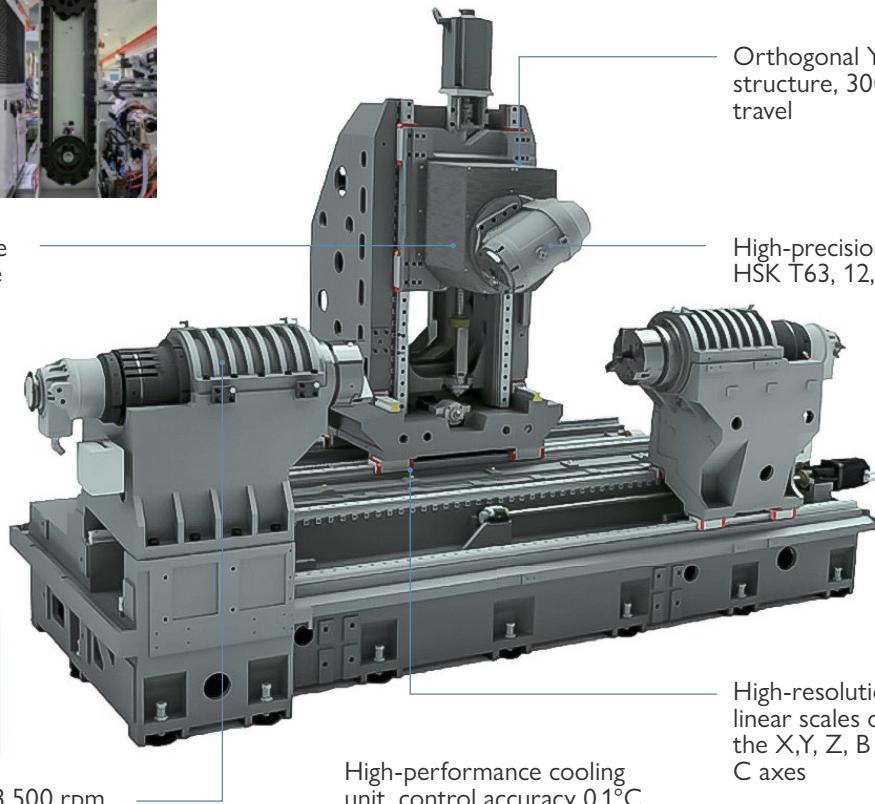
### Features

- A28 Motor spindle
- High-speed milling spindle with taper HSK T63 and spindle speed 12,000 rpm
- Internal coolant supply to the main and counter spindle, B-axis, and milling spindle
- Siemens SINUMERIK ONE control

Servo tool  
changer  
with 40 tool  
positions



B axis 240° large angle  
Direct drive structure



Orthogonal Y-axis  
structure, 300 mm  
travel



High-precision milling spindle,  
HSK T63, 12,000 rpm, 100 Nm



A28 motor spindels, 3,500 rpm

High-performance cooling  
unit, control accuracy 0.1°C

### Typical parts

Spindle sub-spindle  
connection



Parts with complex  
contours



Free-form surface  
machining



Shafts

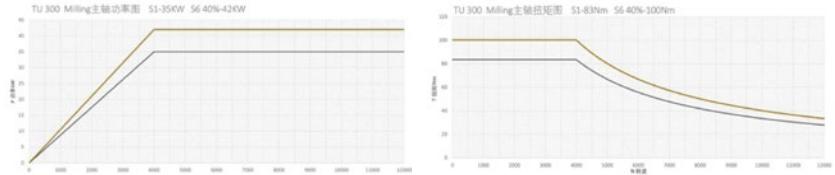


# Siemens SINUMERIK ONE



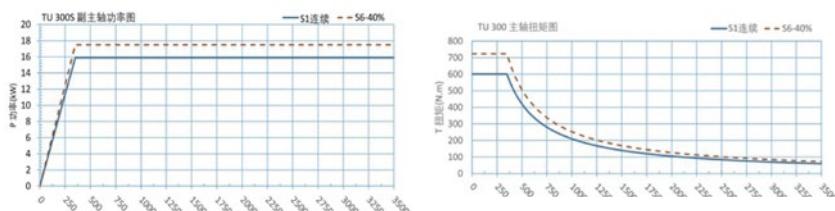
## Milling Spindle – HSK T63, 12,000 rpm

Power (S1-35kW,S6-42kW); Torque (S1-83Nm,S6-100Nm)



## Main spindle – 3,500 rpm

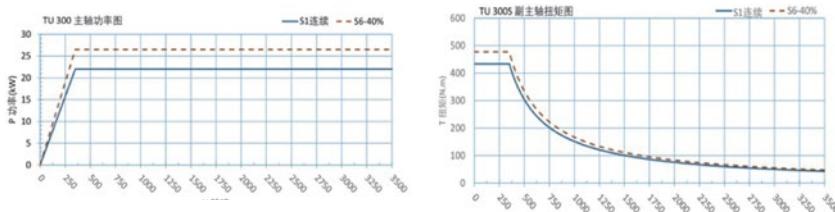
Power (S1-22kW,S6-26.5kW); Torque (S1-600Nm,S6-723Nm)



## Sub-spindle – 3,500 rpm

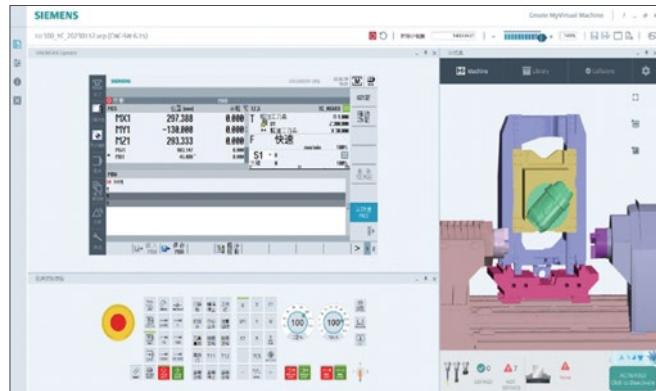
Power (S1-17.5kW,S6-15.9kW); Torque (S1-433Nm,S6-477Nm)

- User-friendly interface
- Digital Twin (Option)
- Color touch screen display 22"
- Storage expansion mode SD card /USB/ Ethernet
- Shop Turn/Shop mill
- Graphical 3D simulation
- Face/cylinder conversion
- Top Surface
- Top Speed Plus
- Pre-reading 3000
- Collision Detection ECO
- 2D/3D protected area
- Graphical conversational programming
- Graphical HMI
- Maximum number of parts programs on NCU is 1000
- Execute the program from the network drive
- Tool life and workpiece number monitoring



## Digital Twin (option)

- The machine's digital twin allows programs to be created, simulated, and tested offline before being executed on the real machine.
- Optimization of machining processes
- Increased process reliability
- Reduction of machining time



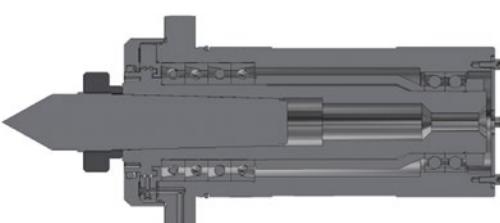
## User-friendly interface

- Intuitive HMI
- Simple intuitive operation
- Easy monitoring of tool life and tool number
- Integrated maintenance interface



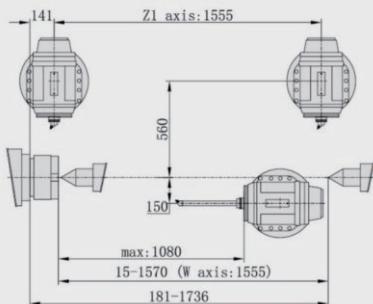
## Servo tailstock

- MT5 tailstock (in standard version TM300)
- The tailstock is equipped with a bearing rotation device, allowing the use of a center for improved rotational accuracy and enhanced rigidity.

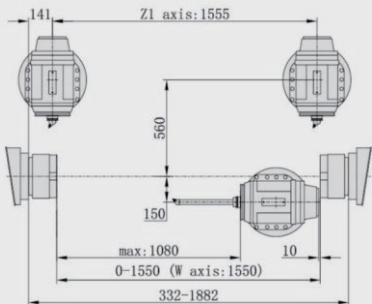


# Travel

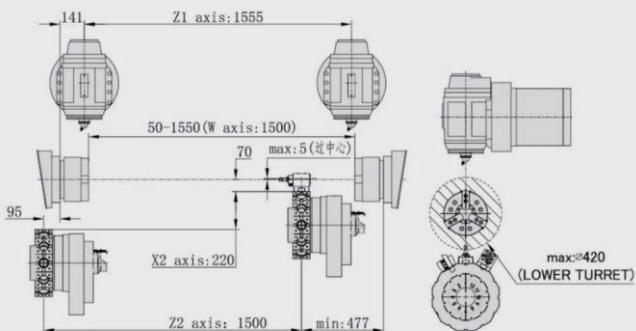
TM300



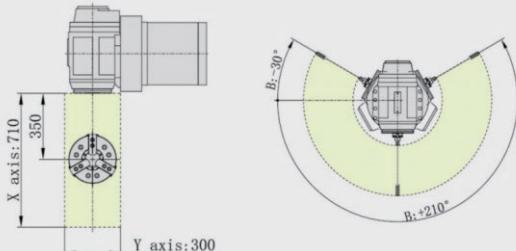
TM300S



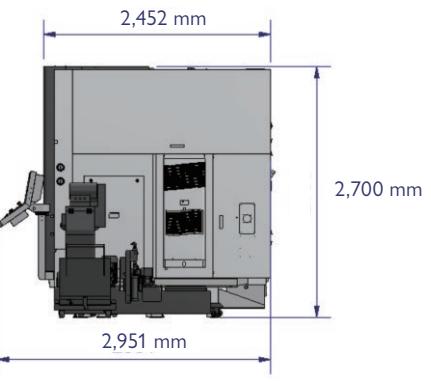
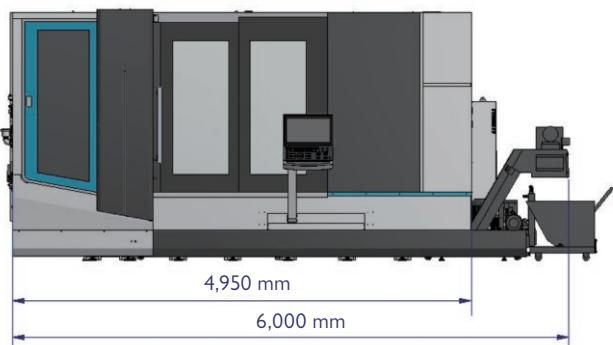
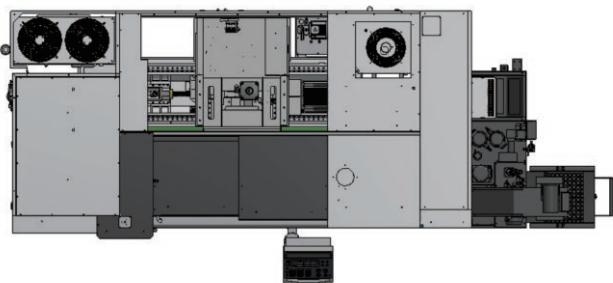
TM300ST



Milling spindle



# Machine Dimensions



# Technical Data

		TM300	TM300S	TM300ST
<b>Workrange</b>				
Max. rotation diameter	mm		700	
Max. turning diameter	mm		700	
Max. turning length	mm		1,500	
Max. bar through hole diameter	mm		78	
<b>Travel</b>				
X/Z/Y-Axis travel	mm		710/1,555/300	
B-Axis rotation angle	°		240	
<b>Spindle</b>				
Chuck size	"		10	
Spindle speed	rpm		3500	
Spindle nose			A28	
Spindle power (S6/S1)	kW		26.5/22	
Output torque (S6/S1)	Nm		723/600	
Spindle through hole diameter	mm		88	
<b>Milling spindle</b>				
Taper type			HSK T63	
Milling spindle speed	rpm		12,000	
Spindle power (S6/S1)	kW		42/35	
Output torque	Nm		100	
<b>Sub-spindle</b>				
Spindle nose		-	A28	
Spindle speed	rpm	-	3,500	
Spindle power (S6/S1)	kW	-	17.5/15.9	
Output torque (S6/S1)	Nm	-	477/433	
<b>Lower turret</b>				
Turret type		-		BMT55
Tool capacity		-		12
Max. turning diameter	mm	-		420
X2/Z2-Axis travel	mm	-		220/1,500
X2/Z2-Axis rapid speed	m/min	-		30/36
<b>Rapid speed</b>				
X/Y/Z-Axis	m/min		48/40/48	
<b>Tool magazine</b>				
Tool capacity			40T	
Max. tool diameter	mm		90 (Adjacent without tools 125)	
Max. tool length	mm		400	
Max. tool weight	Kg		12	
<b>Tailstock-Servo</b>				
Taper type		MT5		-
<b>Coolant</b>				
Coolant tank capacity	L		400	
High pressure thru mill spindle	bar		20	
<b>Other</b>				
Dimensions	mm		6,000 x 2,452 x 2,700 (with chip conveyor)	
Weight	Kg		15,000	
Power requirement	KVA		70	
Compressed air requirement			6~8bar, 600L/min	



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