

S Series Machine Tools for Petroleum Industry

Dedicated service line

400-615-9999



The explanation, diagram and technical parameter are varying with continuous technology development, without further notice.
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S Series [Classic Model] Machine Tools for Petroleum Industry



STC Series [Economical-type]

High accuracy,
high efficiency and
lead-edge technologies



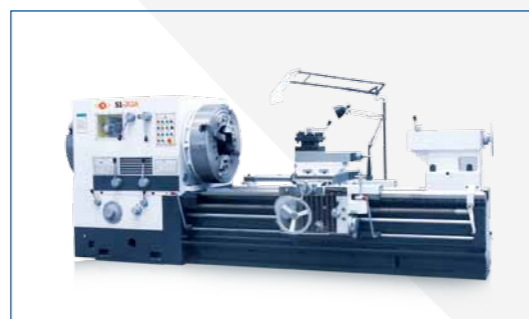
S Series [Efficient-type]



SUC Series [Special-purpose]



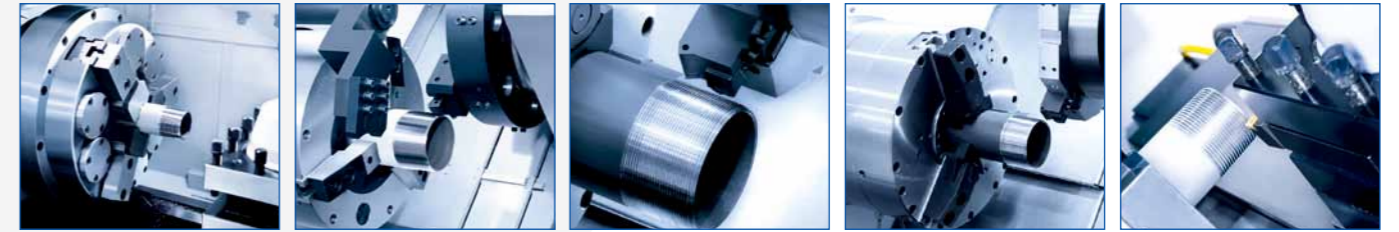
Sn Series [Composite-type]



S1 Series [Common-type]

Application fields

Petroleum pipe



Petroleum pipe coupling



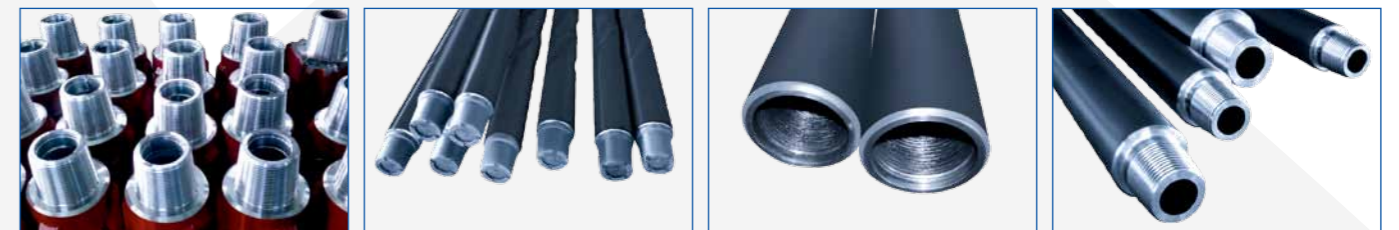
Petroleum casing pipe



Drilling bit and screw stem for petroleum



Drill pipe joint and drill collar



STC Series [Economical-type CNC Pipe Threading Lathe]

Classic model with continuous optimization

Product Introduction

STC series is a pipe threading lathe combining economy, practicability and professionalism and adopts FANUC system. The product is mainly used for pipe threading machining, and is able to cut metric and British system cylindrical/conical threads. In addition, this machine tool is also able to undertake the work of ordinary lathe, for example, lathe work for shaft and disc components of various shapes/surfaces such as arc conical surface, ordinary thread, internal and external cylindrical surface. The product applies to petroleum sector, metallurgical sector, chemical sector, hydropower/geology sector and can be used for machining drill pipe, drill collar, casing pipe and petroleum casing pipe. The product applies most to casing pipe machining in the petroleum industry. The normal machining accuracy of the machine tool can reach IT6-IT7, and the surface roughness of workpiece can reach Ra1.3μm. The product is a preferred practical equipment for large scale machining of petroleum pipe thread.



Technical parameters

Items	Unit	STC 11	STC 18	STC 22	STC 34
Maximum swing diameter over bed	mm	Φ630	Φ630	Φ800	Φ900
Maximum cutting length	mm	600	600	1000/1500/3000	1000/1500/3000
Maximum cutting diameter	mm	Φ114	Φ180	Φ219 (powered chuck)	Φ340
Scope of application for petroleum products	inc	2 3/8 " -4 1/2 "	2 3/8 " -7 "	4 1/2 " -8 5/8 " (powered chuck)	4 1/2 " -13 3/8 "
Spindle speed range	r/min	90-610	90-610	90-450	90-350
Output power of main moto	kW	22/30	22/30	22/30 30/37 (3000)	22/30 (1000/1500) 30/37 (3000)
Spindle bore diameter	mm	Φ120	Φ205	Φ240 (powered chuck)	Φ355
X-axis rapid traverse speed	m/min	6	6	4	4
Z-axis rapid traverse speed	m/min	10	10	8	8
X-axis travel	mm	360	360	300	300
Z-axis travel	mm	600	600	1000/1500/3000	1000/1500/3000
Machining accuracy	-	IT6-IT7	IT6-IT7	IT6-IT7	IT6-IT7
Standard tool post type		Vertical 4-position 32×32	Vertical 4-position 32×32	Vertical 4-position 40×40	Vertical 4-position 40×40

Remarks: the parameters provided in the table are only for reference, and please refer to the actual product in case of change.

S Series [Efficient-type CNC Pipe Threading Lathe]

High accuracy, high efficiency and lead-edge technologies

Product Introduction

S series is a pipe threading CNC machine tool featuring high efficiency and high accuracy. The product is mainly used for thread machining of petroleum pipe, casing pipe and drill pipe, and is able to machine API5B, 5CT long/short knuckle thread, buttress thread and special thread of American Petroleum Institute standard. The product features characteristics such as high rigidity, high accuracy and high accuracy stability, and is configured with optional auxiliary machine unit.



Technical parameters

Items	Unit	S 18	S 22	S 34
Maximum swing diameter over bed	mm	Φ650	Φ720	Φ850
Maximum cutting length	mm	200	200	200
Maximum cutting diameter	mm	Φ140/Φ180	Φ220/Φ245	Φ300/Φ340
Scope of application for petroleum products	inc	2 3/8 " -5 1/2 " / 2 3/8 " -7 "	3 1/2 " -9 5/8 "	5 1/2 " -10 3/4 "
Spindle speed range	r/min	200-750/200-670	200-600/200-550	90-400
Output power of main motor	kW	22/30 (Main servo)	22/30 (Main servo)	30/37 (Main servo)
Spindle bore diameter	mm	Φ160/Φ200	Φ240/Φ260	Φ300/Φ365
X-axis rapid traverse speed	m/min	10	10	8
Z-axis rapid traverse speed	m/min	12	12	10
X-axis travel	mm	350	350	480
Z-axis travel	mm	650	650	650
Machining accuracy	-	IT6	IT6	IT6
Standard tool post type	-	Gang tool 32× 32	Vertical 6-position	Vertical 6-position
Optional tool post type	-	Vertical 6-position and horizontal 8-position	Gang tool 32× 32, horizontal 8-position	Horizontal 8-position

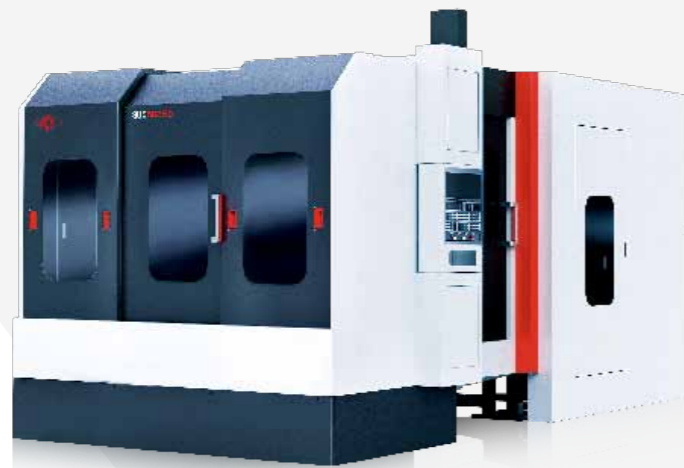
Remarks: the parameters provided in the table are only for reference, and please refer to the actual product in case of change.

SUC6035b [Special-purpose CNC Machine Tools]

Customization and originality

Product Introduction

SUC6035b is a special machine tool for fine machining of cylindrical surface, R groove and end face of quenched thread journal of petroleum drill bit, and features automatically control, measurement and alignment of workpiece, and assurance of uniform machining allowance, good surface roughness effect of the machined workpiece, high efficiency and stability, six-axis five-linkage, and high-precision U-axis facing head.



Technical parameters

Items	Unit	SUC 6035b
Scope of application of petroleum products	inc	3 7/8 " -17 1/2 "
A-axis positioning accuracy		10 "
A-axis swing angle		360°
Workbench pressure resistance	MPa	≥ 3.5
B-axis revolving accuracy		0.01/100
B-axis swing angle		±5°
X-axis rapid traverse speed	m/min	20
X-axis positioning accuracy	mm	0.008
X-axis travel	mm	200
Y-axis rapid traverse speed	m/min	20
Y-axis positioning accuracy	mm	0.008
Y-axis travel	mm	300
Z-axis rapid traverse speed	m/min	20
Z-axis positioning accuracy	mm	0.008
Z-axis travel	mm	1150
Maximum rotation speed of U-axis	r/min	750 (tool is at the center of U-axis)
Maximum rotation speed of U-axis	r/min	500 (tool is at a position ±25 from U-axis)
U-axis positioning accuracy	mm	0.008
U-axis travel	mm	±25
Spindle torque	Nm	95.5



Remarks: the parameters provided in the table are only for reference, and please refer to the actual product in case of change.

SUC Series [Special-purpose CNC Machine Tools]

Customization and originality

Product Introduction

SUC34/50/60 is a special CNC machine tool for thread machining of large diameter pipe. The product adopts facing head structure and tool-revolving machining and is especially suitable for machining large diameter pipe.

The product features double hydraulic chucks, the front chuck features centering plus floating multi-point clamping to reduce deformation of workpiece.

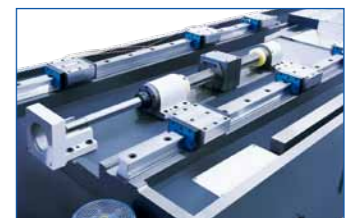
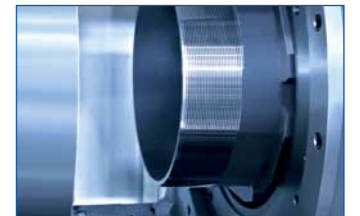
The facing head structure is a patented product of our factory and features stable structure and performance.



Technical parameters

Items	Unit	SUC 34	SUC 50	SUC 60
Maximum cutting diameter	mm	Φ340	Φ508	Φ610
Maximum cutting length	mm	130	130	130
Scope of application for petroleum products	inc	5 1/2 " -13 3/8 "	13 3/8 " -20 "	16 " -24 "
Spindle speed range	r/min	90-400	90-200	90-200
Main motor output power	kW	30/37 (Main servo)	30/37 (Main servo)	30/37 (Main servo)
Z-axis rapid traverse speed	m/min	10	10	10
X-axis travel	mm	70	70	70
Z-axis travel	mm	350	350	350
Machining accuracy		IT6	IT6	IT6
Positioning accuracy				
X-axis	mm	0.02	0.02	0.02
Z-axis	mm	0.02	0.02	0.02
Positioning repeatability				
X-axis	mm	0.012	0.012	0.012
Z-axis	mm	0.0075	0.0075	0.0075

Remarks: the parameters provided in the table are only for reference, and please refer to the actual product in case of change.

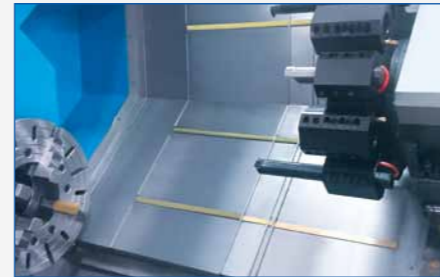


Sn Series [Composite-type CNC Pipe Threading Lathe]

Customization and originality

Product Introduction

Sn series is a CNC machine tool featuring the largest spindle through-hole and multiple functions. The product mainly applies to efficient, large-scale and high accuracy machining of long components for petroleum and engineering industry, etc. In comparison with the machine tools of the same category, the machine tool features large through-hole, long Z-axis travel and multiple optional parts such as tailstock and center rest, etc.



Technical parameters

Items	Unit	S 22100n	S 22150n	S 22200n	S 22300n
Maximum swing diameter over bed	mm	Φ1000	Φ1000	Φ1000	Φ970
Maximum cutting diameter	mm	Φ220	Φ220	Φ220	Φ220
Maximum cutting length	mm	1000	1500	2000	3000
Maximum speed of spindle	r/min	600	600	600	600
Main motor output power	kW	30/37	30/37	30/37	30/37
Spindle bore diameter	mm	Φ240	Φ240	Φ240	Φ240
X-axis rapid traverse speed	m/min	12	12	12	12
Z-axis rapid traverse speed	m/min	15	15	12	12
X-axis travel	mm	-	410	410	410
Z-axis travel	mm	1000	1500	2000	3000
Machining accuracy		IT6	IT6	IT6	IT6
Standard tool post type		Horizontal 8-position tool post	Horizontal 8-position tool post	Horizontal 8-position tool post	Horizontal 8-position tool post

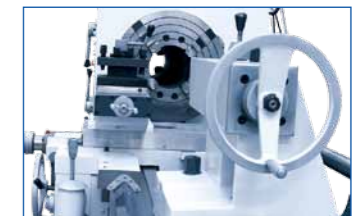
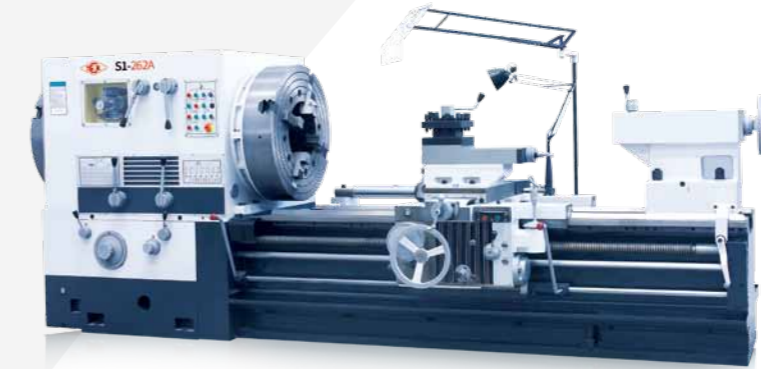
Remarks: the parameters provided in the table are only for reference, and please refer to the actual product in case of change.

S1 Series [Common-type Pipe Threading Lathe]

Economical, multiple functions and continuous inheriting

Product Introduction

The machine tool is a special machine tool which is mainly used for lathe work of pipe thread, and is also used for works such as cylindrical surface turning, boring and plane machining, etc. The product applies to machining and repairing drill pipe, drill collar, square kelly and casing pipe of sectors such as petroleum, metallurgy, chemical, hydroelectricity and geology, etc. The product features favorable price and full functions.



Technical parameters

Items	Unit	S1- 245B	S1- 262A	S1- 320
Main specifications				
Diameter of pipe to be machined	mm	Φ114-Φ219	Φ114-Φ340	Φ219-Φ508
Maximum turning length (saddle travel)	mm	1000/1500/3000	1000/1500/3000	1500/3000
Maximum center distance (when tailstock is used)	mm	1000/1500/3000	1000/1500/3000	1500/3000
Height of spindle center from guiderail surface	mm	450	450	500
Height of spindle center from ground surface	mm	1150	1150	1200
Spindle bore diameter	mm	240	355	515
Spindle speed steps		12	12	12
Spindle speed range	r/min	8-306	5.6-254	6-200
Longitudinal/crosswise feeding: total amount		32	32	32
Longitudinal feeding range	mm/r	0.095-1.44	0.095-1.44	0.1-1.5
Crosswise feeding range	mm/r	0.095-1.44	0.095-1.44	0.1-1.5
Tool post and saddle				
Maximum lateral travel of lower tool post	mm	300	300	560
Maximum travel of upper tool post	mm	200	200	300
Longitudinal/crosswise rapid traverse speed of tool post	m/min	4	4	4
Power of main motor	kW	18.5	18.5	22
Rotation speed of main motor	r/min	1500	1500	1500

Remarks: the parameters provided in the table are only for reference, and please refer to the actual product in case of change.

Configuration of the machine

名称	STC 11	STC 18	STC 22	STC 34	S 18	S 22	S 34	SUC 34	SUC 50	SUC 60	SUC 6035b	S 22100n	S 22150n	S 22200n	S 22300n	S1- 245B	S1- 262A	
Servo system																		
FANUC 0i-TF system (α main servo)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	-	◆	◆	◆	◆	-	-	
SIEMENS_828D	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	-	◇	◇	◇	◇	-	-	
SIEMENS_840D	-	-	-	-	-	-	-	-	-	-	◆	◇	◇	◇	◇	-	-	
Holding system																		
Pneumatic hollow	◆	◆	◇	◇	◆	◆	◆	-	-	-	-	◇	◇	◇	◇	-	-	
Electrically powered hollow	-	-	◆	◆	-	-	-	-	-	-	-	-	-	-	-	-	-	
Manual hollow	◇	◇	◇	◇	◇	◇	◇	-	-	-	-	◆	◆	◆	◆	◆	◆	
Center rest	-	-	◇	◇	-	-	-	-	-	-	-	◇	◇	◇	◇	◇	◇	
Tailstock	-	-	◇	◇	-	-	-	-	-	-	-	◆	◆	◆	◆	◇	◇	
Feeding system																		
Spindle	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Encoder	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	-	-
Homemade spindle bearing	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	-	-	-	-	◆	◆	
Imported spindle bearing	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◆	◆	◆	◆	◆	-	-	
Homemade lead screw bearing	◆	◆	◆	◆	-	-	-	-	-	-	-	-	-	-	-	◆	◆	
Imported lead screw bearing	◇	◇	◇	◇	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	-	-	
Homemade lead screw	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Imported guiderail	-	-	-	-	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	-	-	
Imported lead screw	-	-	◇	◇	◇	◇	◇	◇	◇	◇	◆	◇	◇	◇	◇	-	-	
Machining system																		
Gang tool	-	-	-	-	◆	◇	◇	-	-	-	-	-	-	-	-	-	-	
Vertical 4-position powered tool post	◆	◆	◆	◆	-	-	-	-	-	-	-	-	-	-	-	Vertical 4-position tool post	Vertical 4-position tool post	
Vertical 6-position servo tool post	-	-	-	-	◇	◆	◆	-	-	-	-	-	-	-	-	-	-	
Horizontal 8-position servo tool post	-	-	-	-	◇	◇	◇	-	-	-	-	◆	◆	◆	◆	-	-	
Horizontal 12-position servo tool post	-	-	-	-	-	-	-	-	-	-	-	◇	◇	◇	◇	-	-	
Facing head	-	-	-	-	-	-	-	◆	◆	◆	◆	-	-	-	-	-	-	
Auxiliary machining system																		
Chip remover	-	-	-	-	◆	◆	◆	◆	◆	◆	-	◆	◆	◆	◆	-	-	
Scale	◇	◇	◇	◇	◆	◆	◆	◆	◆	◆	-	◇	◇	◇	◇	-	-	
Hydraulic system	-	-	-	-	◇	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	-	-	
Pneumatic system	◆	◆	◇	◇	◆	◆	◆	-	-	-	◆	◆	◆	◆	◆	-	-	
Lubrication system	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Safety system																		
Alarm light	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	-	-
Sliding door safety lock	-	-	-	-	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	-	-	
Automation system																		
Parts feeder	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	-	◇	◇	◇	◇	-	-	

Remarks: ◆ Standard configuration ◇ Optional configuration