

Universal Cylindrical Grinding Machine

Your partner for presentation of the needs

SUGC series**Universal Cylindrical Grinding Machine**

The SUGC series are compact universal cylindrical grinding machines by SHOKA , and can achieve up to 0.1 μm positioning accuracy. They are suitable for long, multi-steps, and profile cylindrical grinding. Along with the optional internal grinding unit attachment, they provide more flexibility and offer the best choice for your needs.

Features

- Grinding wheel head spindle with unique hydrostatic bearings.
- Hydraulic and manual adjustable tailstock.
- Multi-function, high roundness work head.
- Highly rigid machine base with hydrostatic lubrication on guide ways.
- X and Z-axes have high torque servo motor directly coupled to the class C1 ballscrew.(Φ 40mm)
- Heidenhain sub- μm linear scale with close loop feedback.

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Technical specifications

	CNC Series				Heavy - Duty		
MODEL		SUGC-2020	SUGC-3250	SUGC-32100	SUGC-3540	SUGC-3580	SUGC-35100
CAPACITY							
Swing over table	mm	200	320	320	350	350	350
Distance between centers	mm	200	500	1,000	400	800	1000
Max. grinding diameter	mm	Φ160	Φ280	Φ280	Φ320	Φ320	Φ320
Max. grind wheel dimensions	mm	Φ355x50x127	Φ405x56x127	Φ405 x 56 x 127	Φ 610x100x203.2	Φ 610x100x203.2	Φ 610x100x203.2
Max. load held between centers	kg	30	150	150	150	150	150
Max. grinding wheel peripheral speed	m/s	33(45)	45	45	45(60optional)	45(60optional)	45(60optional)
CONTROL SYSTEM							
Controller	FANUC ISIEMENS/MITSUBISHI						
FEED SLIDE							
X-axis minimum resolution increment	mm	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
X-axis rapid traverse speed	m/min	5	6	6	6	6	6
Z-axis minimum resolution increment	mm	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Z-axis max. traverse speed	m/min	6	8	8	8	8	8
Z-axis can be swiveled manually in deg.	deg.	-0.5~+8	-0.5~+8	-0.5~+5	-0.5-5	-0.5-5	-0.5-5
WORKHEAD							
Spindle speed	r.p.m.	5-750	5-750	5-750	5-750	5-750	5-750
Center		M.T.3	M.TA	M.TA	M.To4	M.To4	M.T.5
Swiveling angle (counterclockwise-clockwise)	deg.	90°- 30°	90° - 30°	90° - 30°			
TAILSTOCK							
Hydraulic sleeve retraction	mm	25	35	35	35	35	35
Center		M.T.3	M.TA	M.TA	M.To4	M.TA	M.T.5
TANK CAPACITY							
Hydraulic tank	L	40	45	45	45	45	45
Coolant tank	L	80	80	80	80	80	80
Wheel head lubrication	L	25	45	45	45	45	45
Tailstock lubrication	L	0.4	0.4	0.4			
DRIVEN MOTORS							
Wheel spindle	HP	3	5	5	20	20	20
Wheel head feed (servo motor)	kw	1.2	1.6	1.6	3.0	3.0	3.0
Table feed (servo motor)	kw	1.2	3.0	3.0	1.2	1.2	1.8
Work head spindle (servo motor)	kw	0.75	1.2	1.2	3.0	3.0	3.0
Hydraulic pump	HP	1	1	1	1	1	1
Wheel spindle lubricant	HP	1/4	1	1	1	1	1
Coolant pump	HP	1/4	1/4	1/4	1/2	1/2	1/2
Internal grinding	HP	1	1	1	1	1	1
OTHERS							
Machine dimensions	mm	1,800 x 2,300 x 2,160	3,000 x 2,000 x 2,260	4,200 x 1,900 x 2,260	3,030x2,000x2,260	4,040 x 2,000 x 2,260	4,400 x 2,000 x 2,260
Machine weight	kg	2,500	3,800	4,800	6,600	7,000	7,200

Technical specifications

		NC/S/P Series		
MODEL		SUGC-3250	SUGC-3275	SUGC-32100
CAPACITY				
Swing over table	mm	320	320	320
Distance between centers	mm	500	750	1,000
Max. grinding diameter	mm	Φ280	Φ280	Φ280
Max. grinding wheel dimensions	mm	Φ405 x 56 x 127	Φ405 x 56 x 127	Φ405x56x127
Max. load held between centers	kg	150	150	150
Max. grinding wheel peripheral speed	m/s	33	33	33
Wheel head hand wheel feed stroke	mm	160	160	160
Wheel head automatic rapid feed stroke	mm	40	40	40
Wheel head automatic in feed stroke	mm	0.001	0.001	0.001
Movement per turn hand wheel	mm	1	1	1
CONTROL SYSTEM (NC Series)				
NC controller		PROFACE		
Wheel head feed (Servo Motor)	kw	004	004	004
FEED SLIDE				
X-axis minimum resolution increment	mm	0.001	0.001	0.001
X-axis rapid traverse speed	m/min	6	6	6
Z-axis minimum resolution increment	mm	,=;0.01	,=;0.01	,=;0.01
Z-axis max. traverse speed	m/min	4	4	4
Z-axis can be swiveled manually in deg.	deg.	-0.5 - +8	-0.5 - +6.5	-0.5 - +5
Z-axis movement per turn of hand wheel	mm	12.5(1.25}	12.5(1.25}	12.5(1.25}
Z-axis min. automatic reciprocating stroke	mm	10-14	10-14	10-14
WORKHEAD				
Spindle speed	r.p.m.	5-750	5-750	5-750
Center		M.To4	M.To4	M.To4
Swiveling angle (counterclockwise-clockwise)	deg.	90' - 30'	90' -30'	90' - 30'
TAILSTOCK				
Hydraulic sleeve retraction	mm	35	35	35
Center		M.To4	M.To4	M.To4
TANK CAPACITY				
Hydraulic tank	L	60	60	60
Coolant tank	L	80	80	80
Wheel head lubrication	L	25	25	25
Tailstock lubrication	L	004	004	004
DRIVEN MOTORS				
Wheel spindle	HP	5	5	5
Work head spindle (servo motor)	kw	1	1	1
Hydraulic pump	HP	2	2	2
Wheel spindle lubricant	HP	1	1	1
Coolant pump	HP	1/4	1/4	1/4
Internal grinding	HP	1	1	1
OTHERS				
Machine dimensions	mm	2,810 x 2,270 x 1,850	3,665 x 2,270 x 1,850	4,630 x 2,270 x 1,850
Machine weight	kg	2,800	3,100	3,800

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Standard accessories

ACCESSORIES	2020	32	32	32	35
	CNC	CNC	NC	SIP	CNC
CNC Controller(FANUCSIEMENSIMITSUBISHI)	0	0	X	X	0
NC Controller(PROFACE)	X	X	0	X	X
Accumulator	▲	▲	▲	▲	▲
Inverter	▲	▲	▲	▲	▲
Linear Scale for X-axis	0	0	▲	▲	0
Linear Scale for Z-axis	▲	▲	▲	▲	▲
Touch Probe	▲	▲	X	X	0
OD In-process Gauge	▲	▲	▲	▲	▲
Gap eliminator/Crush Control	▲	▲	X	X	▲
Coolant Tank with Pump	0	0	0	0	0
Oil Mist Separator	▲	▲	▲	▲	▲
Paper Filter	▲	▲	▲	▲	▲
Magnetic Coolant Separator	▲	▲	▲	▲	▲
Electrical Cabinet Air Cooler	▲	▲	X	X	▲
Electrical Cabinet Heat Exchanger	0	0	X	X	0
Wheel Balancing Stand & Arbor	▲	▲	▲	▲	▲
Cam Locked Driving Dog	▲	▲	▲	▲	▲
Adjustable 3-point Steady Rest	X	▲	▲	▲	▲
Hydraulic Steady Rest	X	▲	▲	▲	▲
Workpiece Holder (1set = 2pcs)	▲	▲	▲	▲	▲
Micro feed Dresser Holder	X	X	▲	▲	X
Tailstock-mounted Dresser Holder	X	▲	▲	▲	▲
Table-mounted Dresser Holder	X	X	0	0	▲
Slide-mounted Dresser Holder	0	0	X	X	0
Vibration Meter	▲	▲	▲	▲	▲
Internal Grinding Attachment	X	▲	▲	▲	X
Grinding Wheel + Flange	0	0	0	0	0
Jig Crane for Grinding Wheel	X	▲	X	X	▲
Rotary-type Dressing Unit (For Diamond Grinding Wheel)	X	▲	X	X	▲
Grinding Wheel Replacement Device	X	▲	X	X	0
Dynamic Wheel Balancer	X	▲	X	X	▲
IDSpindle	X	▲	▲	▲	X
Hydraulic Tank with Pump	0	0	0	0	0
Hydraulic Oil Cooler	▲	0	▲	▲	0
Fully Enclosed Splash Guard	▲	▲	X	X	▲
Micro Taper Adjustment of Tailstock	▲	▲	▲	▲	0
Hydraulic / Manual Tailstock	▲	0	▲	▲	0
Workpiece Chucked Indicator Device	▲	▲	▲	▲	▲
Scroll 3-jaw chuck with Back Plate	▲	▲	▲	▲	▲
Hydraulic 3-jaw chuck + Rotary Cylinder	▲	▲	▲	▲	▲
O Standard Equipment	▲ Optional Equipment		X Not Applicable		

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Optional accessories

