**Werdingtie** www.acemicromatic.net

Corporate Office : Plot No. 240-241, 11th Main Road, 3rd Phase, Peenya Industrial Area, Bangalore-560 058, Ph: 080 40200555, E-mail: salesmmt@acemicromatic.com

#### Sales and Services



#### INTERNATIONAL

Germany T: +49 15774543744 China (Shanghai)



ရွှငြ

#### Ace Designers Ltd.







Follow us on:



Ace Designers @acedesignersbl





# THINK Turning® Ace Designers



www.acedesianers.com

## CNC **SLIDING** HEADSTOCK **AUTOMATS**

High productivity at great precision



## **CNC Sliding Headstock Automats**

The CNC Sliding Headstock Automat machine is of twin spindle sliding head design to bring in productivity of Swiss style automat. The machine elements such as ball screws, bearings, CNC system and drives have been chosen from the best available technology in the world. The machine is built by a dedicated, experienced and skilled team under the guidance of domain experts.

#### SHA Application Examples











































## Accessories





## **SHA 12**



## **Power Torque Diagram**



#### **Machine Features**

- Powerful built in motor for main & sub spindle.
- High speed spindle, range upto 12000 rpm.
- Suitable for small part machining with 5 axes capability.
- Collet holding system with synchronous revolving guide bush, fixed guide bush & without guide bush options.
- Houses 20 tools including 3 rotary tools.
- Simultaneous machining on both main & sub spindle to increase productivity.
- Continuous run with bar feeder from ø3mm to ø12mm.

#### **Standard Accessories**

- Main spindle chucking device
- Sub spindle chucking device
- Oil cooling unit for both the spindle
- Rotary tool driving device to accommodate 3
  live tools
- Normal pressure coolant system
- Centralised lubrication system (with level detector)
- Pneumatic device for rotary tool air sealing
- Knock device for component ejection and for collection
- Built in lighting system
- Synchronous rotating guidebush device
- Workpiece collecting box

#### **Optional Accessories**

- Bar feeder
- Chip conveyor with tilting bin
- Mist collector system

#### **Control System Details**

- 10.4" color LCD
- 2 path control
- Simultaneously controlled 4 axes
- PMC Axis control
- Tool nose radius compensation
- Tool life management
- Self-diagnostics
- Part program storage size 1MB
- No. of registerable programs 800
- Absolute/incremental programming
- Diameter/radius programming (X axis)
- Custom macro
- Multiple repetitive cycles
- Thread/Synchronous cutting
- Rigid tapping
- Direct drawing dimension programming
- Inch/metric switchable
- Graphic display
- Clock function
- Multi-language display
- Alarm/operation history display
- Unexpected disturbance torque detection function

## **Machining Range**



D = Bar Diameter Range : 3mm To 12mm L = Maximum Machining Length (with Rotary Guide Bush): 80mm

## **Interference Diagram**



## **Overall Views**





## **Specifications**

#### **SHA 12**

Control System	Fanuc
Machining Capacity	
Max. machining diameter (D)	03-12 mm
Max. machining length (L) with rotary guide bu	sh 80 mm
Max. machining length (L) with fixed guide bus	h 210 mm
Max. machining length (L) without guide bush	2D
Max. front drilling diameter - Main Spindle	7 mm
Max. front tapping diameter (tap, die)-Main spi	ndle M6x1
Maximum chuck diameter of Sub spindle	12 mm
Max. Drilling diameter in back machining	7 mm
Max. Tapping in back machining	M6x1
Max. Drilling diameter of cross rotary tool	6 mm
Max. Tapping of cross rotary tool	M5x0.8
Machining Capability	
Max Main spindle speed	12000 RPM
Max. Sub Spindle Speed	12000 RPM
Max Spindle speed of cross rotary tool	6000 RPM
Max. No. of tools that can be mounted	20
Turning tools on the gang tool post	5(3+2)
Number of cross rotary tools	3
Tools for front drilling	4
Tools for back drilling	8(4+4)
Tool size ( turning tool shank )	12 mm
Sleeve size (tool holder)	Ø20 mm
Rapid feed rate Z1, Z2, X2	32 m/min.
Rapid feed rate X1, Y1	24 m/min.
Motors	
Main Spindle - cont./5min	1.5 / 2.2 kW
Back Spindle - cont./5min	1.5 / 2.2 kW
Cross rotary tool	0.75 kW
Z1, Z2, X1, X2,	0.5 kW
Y1 (Vertical Axis)	0.75 kW
Coolant Pump Unit	0.2 kW
Lubrication Pump Unit	0.09 kW
Collet	
Main spindle collet chuck	SF 20/201
Sub spindle collet chuck	SF 20/201
Rotary tool collet chuck	ER 16, ER 11
Chuck for drill sleeves	ER 11
Guide bushing	R 24/03
General Information	
Coolant Capacity	115 litres
Spindle Center Height	1000 mm
Air pressure	6 Bar
Overall Machine Dimension $(L \times W \times H)$	1242 X 1916 X 1916 mm
<b>Overall Weight</b> (Without Packing) (Approx)	~ 1950 kg

#### Note:

Owing to continuous up-gradation of our products, the specification may change and to be reconfirmed at the time of ordering.

## **SHA 20**





## **Power Torque Diagram**



#### Machine Features

- Rigid symmetric bed design.
- Powerful built in motor for main and sub spindle.
- Spindle speed up to 8000 rpm
- 5 Axes capability.
- Suitable for small parts machining
- Collet holding system with synchronous revolving guide bush system.
- Houses 21 tools including 3 rotary tools.
- Continuous run with bar feeder from Dia 3 to dia 20mm.

#### Standard Accessories

- Main Spindle Chucking Device
- Sub Spindle Chucking Device
- Headstock Cooling Device
- Rotary Tool Driving Device to accommodate 3 live
- Normal Pressure Coolant System
- Centralised Lubrication System (with level detector)
- Door Switch
- Pneumatic device for air sealing
- Knockout device for component ejection
- Built-in Lighting systemSynchronous rotating guide bush device
- Work piece collecting chute and work piece collecting box

#### **Optional Accessories**

- Barfeeder
- Work piece Conveyor
- Chip Conveyor with Tilting BinMedium pressure cooling system
- Long work piece ejection system
- 4 rotary tool device
- Back rotary tool device
- Mist collector system.
- Chiller unit

#### Control System Details

- 10.4" color LCD
- 2 path control
- Simultaneously controlled 4 axes
- PMC Axis control
- Tool nose radius compensation
- Tool life management
- Self-diagnostics
- Part program storage size 1MB
- No. of registerable programs 800
- Absolute/incremental programming
- Diameter/radius programming (X axis)
- Custom macro
- Multiple repetitive cycles
- Thread/Synchronous cutting
- Rigid tapping
- Direct drawing dimension programming
- Inch/metric switchable
- Graphic display
- Clock function
- Multi-language display
- Alarm/operation history display
- Unexpected disturbance torque detection function

## **Machining Range**



## **Interference Diagram**



## **Overall Views**



All dimensions are in mm

### **Specifications**

#### **SHA 20**

Control System	Fanuc
Machining Capacity	
Max. machining diameter (D)	20 mm
Max. machining length (L) Front Ejection	100 mm
Max. front drilling diameter	10 mm
Max. front tapping diameter (tap, die)	M8
Maximum chuck diameter of sub spindle	20 mm
Spindle through-hole diameter	24 mm
Max. drilling diameter in back machining prod	cess 8 mm
Max. tapping diameter in back machining pro	cess M6
Max. drilling diameter of gang rotary tool	7 mm
Max. tapping diameter of gang rotary tool	M6
Machining Capability	
Max main spindle speed	8000 rpm
Max sub spindle speed	8000 rpm
Max. spindle speed of gang rotary tool	6000 rpm
Max. No. of tools that can be mounted	21
Turning tools on the gang tool post	б
Cross rotary tools	3
Tools for front drilling	4
Tools for back drilling	8 (4+4)
Tool size (gang tool post)	square ½", (12 x 12mm)
X1 axis (Rapid Traverse)	18m/min
X2, Y1, Z1, Z2 axes (Rapid Traverse)	32m/min
Motors	
Main Spindle - cont / 30 min	2.2 / 3.7 kW
Sub Spindle - cont / 30 min	2.2 / 3.7 kW
Cross Rotary tool	0.75 kW
Axes ( X1,Z1,Y1,X2,Z2)	0.75 kW
Coolant Pump - Normal pressure	0.2kW
Coolant Pump - Medium pressure	0.75 kW
Lubrication Pump Unit	0.09kW
Collet	
Main spindle collet chuck	SF 25/64
Sub spindle collet chuck	SF 25/64
Rotary tool collet chuck	ER 16
Chuck for drill sleeves	ER 16
Guide bushing	R 28/04
General Information	·
Coolant Capacity	150 Litres
Spindle Center Height (with pads)	1100 mm
Air pressure	6 bar
Overall Machine Dimensions	7450 x 1379 x 1850 mm
(I x W x H)	
Overall Weight	-2950 kg
(Without Packing) (Approx)	2000 110
(Therear i activity) (The activity)	

Note:

Owing to continuous up-gradation of our products, the specification may change and to be reconfirmed at the time of ordering.

## SHA 20/3



## **Power Torque Diagram**



#### **Machine Features**

- Powerful built in motor for main spindle.
- High speed spindle, range upto 10000 rpm.
  Suitable for small part machining with 3 axes capability.
- Collet holding system with synchronous revolving guide bush & without guide bush options.
- Houses 12 tools including 3 rotary tools.Continuous run with bar feeder from
- Continuous run with bar feed ø3mm to ø20mm.

#### **Standard Accessories**

- Main Spindle Chucking Device
- Headstock Cooling Device
- Rotary Tool Driving Device to accommodate 3
   live tools
- Normal Pressure Coolant System
- Centralised Lubrication System (with level detector)
- Door Switch
- Pneumatic device for air sealing
- Built-in Lighting system
- Synchronous rotating guide bush device
- Work piece collecting chute and work piece collecting box
- Guide bushless kit

#### **Optional Accessories**

- Barfeeder
- Chip Conveyor with Tilting Bin
- Medium pressure cooling system
- 4 rotary tool device
- Mist collector system.

#### **Control System Details**

- 10.4" color LCD
- 1 path control
- Simultaneously controlled 4 axes
- PMC Axis control
- Tool nose radius compensation
- Tool life management
- Self-diagnostics
- Part program storage size 512 KB
- No. of registerable programs 400
- Absolute/incremental programming
- Diameter/radius programming (X axis)
- Custom macro
- Multiple repetitive cycles
- Thread/Synchronous cutting
- Rigid tapping
- Direct drawing dimension programming
- Inch/metric switchable
- Graphic display
- Clock function
- Multi-language display
- Alarm/operation history display
- Unexpected disturbance torque detection function

## **Machining Range**



## **Interference Diagram**



## **Overall Views**





All dimensions are in mm

## **Specifications**

#### SHA 20/3

Fanuc 20mm 80mm 2D 10mm M10 6mm M5 x 0.8 ø 30mm 10000rpm
20mm 80mm 2D 10mm M10 6mm M5 x 0.8 ø 30mm 10000rpm
20mm 80mm 2D 10mm M10 6mm M5 x 0.8 ø 30mm 10000rpm
80mm 2D 10mm M10 6mm M5 x 0.8 ø 30mm 10000rpm
2D 10mm M10 6mm M5 x 0.8 ø 30mm 10000rpm
10mm M10 6mm M5 x 0.8 ø 30mm 10000rpm
M10 6mm M5 x 0.8 ø 30mm 10000rpm
6mm M5 x 0.8 ø 30mm 10000rpm
M5 x 0.8 ø 30mm 10000rpm
ø 30mm 10000rpm
10000rpm
10000rpm
8000rpm
6000rpm
12
5(3+2)
3(4 option)
4
12mm X 12mm
ø20mm
32 m/min
24 m/min
2.2 / 3.7kW
0.75 kW
0.5 kW
0.75 kW
0.54 kW
0.09 kW
SF 25/64
ER 16
ER 16
R 28 / 04
115 litres
1000mm
6 Bar
6 Bar ) x 1250 x 1790 mm

Note:

Owing to continuous up-gradation of our products, the specification may change and to be reconfirmed at the time of ordering.

## SHA 20 Optima



## **Power Torque Diagram**



— — — 10 MIN RATING



#### **Machine Features**

- Rigid FEA optimized bed design
- Powerful built in motor for main & sub spindle; Oil cooled Headstock
- Motorized modular direct drive rotary guide bush(RGB)
- Spindle speed up to 8000 rpm
- 5 Axes capability •
- Suitable for small & medium parts machining
  - Collet holding system with RGB or without
- Guide bush option
- Houses 27 tools including 4 rotary tools
- Simultaneous machining on both main & sub spindle to increase productivity
- Continuous run with servo bar feeder from  $\emptyset$  5 to Ø 32mm

#### **Standard Accessories**

- Main spindle chucking device
- Sub spindle chucking device
- Oil cooling unit for both the spindle
- Rotary tool driving device to accommodate 4 live
- Normal pressure coolant system
- Centralised lubrication system (with level detector)
- Pneumatic device for rotary tool air sealing
- Knock device for component ejection and for collection
- Built in lighting system Guide bushless kit
- Workpiece collecting box

#### **Optional Accessories**

- Bar feeder
- Chip conveyor with tilting bin
- Direct drive rotary guidebush
- Carrier type guide bush
- High pressure coolant system
- Mist collector system

#### **Control System Details**

- 10.4" color LCD
- 2 path control
- Simultaneously controlled 4 axes
- PMC Axis control
- Tool nose radius compensation
- Tool life management
- Self-diagnostics
- Part program storage size 1MB
- No. of registerable programs 800
- Absolute/incremental programming
- Diameter/radius programming (X axis)
- Custom macro
- Multiple repetitive cycles
- Thread/Synchronous cutting
- Rigid tapping
- Direct drawing dimension programming
- Inch/metric switchable
- Graphic display
- Clock function
- Multi-language display
- Alarm/operation history display
- Unexpected disturbance torque detection function

## **Machining Range**



## **Interference Diagram**



## **Overall Views**





## **Specifications**

#### SHA 20 Optima

Control System	Fanuc
Machining Capacity	
Max. machining diameter (D)	20 mm
Max. machining length (L) without guide bush	2D
Max. machining length (L) with carrier type guid	de bush 80 mm
Max. machining length (L) with direct drive guid	de bush 170 mm
Max. front drilling diameter - Main Spindle	10 mm
Max. front tapping diameter (tap, die)-Main spi	ndle M10
Maximum chuck diameter of Sub spindle	Ø20 mm
Max. Drilling diameter in back machining	Ø8 mm
Max. Tapping in back machining	M8
Max. Drilling diameter of cross rotary tool	6 mm
Max. Tapping of cross rotary tool	M5x0.8
Max. Slotting cutting dia	30mm
Machining Capability	
Max Main spindle speed	10000 RPM
Max. Sub Spindle Speed	12000 RPM
Max Spindle speed of cross rotary tool	6000 RPM
Max. No. of tools that can be mounted	21
Turning tools on the gang tool post	5(3+2)
Number of cross rotary tools	4
Tools for front drilling	4
Tools for back drilling	8(4+4)
Tool size ( turning tool shank )	12 mm
Sleeve size (tool holder)	Ø20 mm
Rapid feed rate Z1,Z2,X2	32 m/min.
Rapid feed rate X1,Y1	24 m/min.
Motors	
Main Spindle - cont./10min	2.2 / 3.7 kW
Back Spindle - cont./5min	1.5 / 2.2 kW
Cross rotary tool	0.75 kW
Z1,Z2,X1,X2,	0.5 kW
Y1 (Vertical Axis)	0.75 kW
Coolant Pump Unit	0.2 kW
Lubrication Pump Unit	0.09 kW
Collet	
Main spindle collet chuck	SF25/64
Sub spindle collet chuck	SF25/64
Rotary tool collet chuck	ER16, ER11
Chuck for drill sleeves	ER11
Guide bushing	CGB R28/04, DDGB R26/02
General Information	
Loolant Capacity	115 litres
Spindle Center Height	1000 mm
Air pressure	6 Bar
<b>Overall Machine Dimension</b> $(L \times W \times H)$	1242 X 1916 X 1916 mm
<b>Overall Weight</b> (Without Packing) (Approx)	~ 2000 kg

Note:

Owing to continuous up-gradation of our products, the specification may change and to be reconfirmed at the time of ordering.

## **SHA 32**



### Machining Range (SHA 32/5)



### Interference Diagram (SHA 32/5)



#### **Machine Features**

- Rigid FEA optimized bed design
- Powerful built in motor for main & sub spindle;
   Oil cooled Headstock
- Motorized modular direct drive rotary guide bush(RGB)
- Spindle speed up to 8000 rpm
- 5 Axes capability
- Suitable for small & medium parts machining
- Collet holding system with RGB or without Guide bush option
- Houses 27 tools including 4 rotary tools
- Simultaneous machining on both main & sub spindle to increase productivity
- Continuous run with servo bar feeder from Ø 5 to Ø 32mm

#### **Standard Accessories**

- Main spindle chucking device
- Sub spindle chucking device
- Oil cooling unit for both the spindle and Direct drive rotary guide bush
- Rotary tool device to accommodate 4 live tools
- Normal pressure coolant system
- Centralized lubrication system with level detector
- Built in Lightning system
- Work piece Conveyer
- Deep hole drill
- Knock out Device for Component Ejection & for collection
- Pneumatic device air sealing system for Rotary tools & Rotary guide bush

#### **Optional Accessories**

- Bar feeder
- Chip conveyor with tilting bin
- High pressure cooling system
- Mist collector system
- Sub spindle driven rotary tool device
- 3 Plugin cross rotary tool in lieu of 5 turning tools

#### **Control System Details**

- 10.4" color LCD
- 2 path control
- Simultaneously controlled 4 axes
- PMC Axis control
- Tool nose radius compensation
- Tool life management
- Self-diagnostics
- Part program storage size 1MB
- No. of registerable programs 800
- Absolute/incremental programming
- Diameter/radius programming (X axis)
- Custom macro
- Multiple repetitive cycles
- Thread/Synchronous cutting
- Rigid tapping
- Direct drawing dimension programming
- Inch/metric switchable
- Graphic display
- Clock function
- Multi-language display
- Alarm/operation history display
- Unexpected disturbance torque detection function

### Specifications

SHA 32/5

Control System	Fanuc	
Machining Capacity	27 mm	
Max. machining longth (L)	52 11111	
with rotary guide bush	320 mm	
Max. machining length (L) without guide bush	2xD mm	
Max. front drilling diameter - main spindl	e 12 mm	
Max. front tapping diameter (tap, die) (main spindle)	M 10	
Maximum chuck diameter of sub spindle	32 mm	
Max. drilling diameter in back machining process	10 mm	
Max. tapping diameter in back machining process	M10	
Max. drilling diameter of cross rotary tool	8mm	
Max. tapping diameter of cross rotary too	N8	
Max. tool spindle slotting cutter dia	40 mm	
Machining Capability		
Max main spindle speed	8000 RPM	
Max sub spindle speed	8000 RPM	
Direct drive rotary guide bushing	8000 RPM	
Max. spindle speed of cross rotary tool	6000 RPM	
Max. No. of tools that can be mounted	27	
Turning tools on the gang tool post	12	
Cross rotary tools	4	
Tools for front drilling	7	
Tools for back drilling (Stationary)	4	
Tool shank size (gang tool post)	∐ l6mm	
X1 Y1 axes (Ranid Traverse)	- 74 m/min	
X2, 71, 72 axes (Rapid Traverse)	30 m/min.	
Plugin cross rotary tool in lieu of 5 turning tools (Optional)	3	
Motors		
Main Spindle - cont / 15 min	3.7 / 5.5 kW	
Sub Spindle - cont / 15 min	3.7 / 5.5 kW	
Cross Rotary Tool	1.2 kW	
Plugin Cross Rotary Tool (Optional)	1 kW	
Back Rotary Tool	-	
Axes X1, Y1, Z1, X2, Z2	1.2 kW	
Axis Y2	-	
Coolant Pump RKM 120 (Normal pressure	) 1.1 kW	
(High pressure) (Optional)	1.5 kW	
Lubrication Pump Unit Cenlub	0.09	
	0.05	
Main spindlo collot shuck		
Sub spindle collet chuck	SE 37 / 740	
Botary tool collet chuck	ER 16 ER 20	
Chuck for drill sleeves	FR 16 FR 20	
Guide bushing	R41 / 07	
General Information		
Coolant Capacity	200 litres	
Spindle Center Height (with pads)	1100 mm	
Air pressure	6 Bar	
<b>Overall Machine Dimensions</b> $(L \times W \times H)$	2800 X 1600 X 2180mm	280
Overall Weight (Without Packing)	~ 3800 kg	
	2000 1.8	

**Note:** Owing to continuous up-gradation of our products, the specification may change and to be reconfirmed at the time of ordering.

SHA 32/6
Fanuc
32 mm
320 mm
2xD mm
12 mm
M 10
32 mm
10 mm
M10
8mm
M8
40 mm
8000 RPM
8000 RPM
8000 RPM
6000 RPM
31
12
4
7
4
🗆 16mm
4
24 m/min
30 m/min.
3
3.7 / 5.5 kW
3.7 / 5.5 kW
1.2 kW
1 kW
1 kW

1.2 kW 0.75 kW 1.1 kW 1.5 kW 0.09 5F 37 / 740 5F 37 / 740 ER 16, ER 20 ER 16, ER 20 ER 16, ER 20 ER 16, ER 20 I CO Litres 1100 mm 6 Bar 00 X 1600 X 2180mm

#### ~ 4000 kg

#### **Power Torque Diagram**



**15 MIN RATING** 

#### **Overall Views**





All dimensions are in mm