SUGINO

CAT.NO.N2613E

Mechanical feed and electronic control drilling unit

selfeeder™

SERVO series

SUGINO MACHINE LIMITED

selfeeder™ SERVO series

Highly rigid and long stroke(up to 300mm) drill unit with compact size.Variety of models available for wide ranges of machining requirements.

selfeeder servo series is a high-precision CNC controlled drilling unit capable to drill newly developed material and exotic material.
High quality servo motor for feed and precise ball screw designed eliminate the feed rate fluctuation of feed speed by drilling force; less burr generation for through hole drilling and longer tool life.
High precision, high efficiency, less space and cost reduction that are critical for the machining operation can be gained with this selfeeder servo series.

Features of Selfeeder Servo series

High quality drilling

The fluctuation of the feed speed is eliminated by the precise angular bearing supporting spindle and the high quality ball screw. As the result the generation of burr is reduced and the tool life is longer.

High-rigidity, high-precision structure

A newly developed structure holds the spindle ball screw and linear guide making the drill unit body rigid and strong enough to step spot face and burnish drilling. (JP PAT.)

Selfeeder Varimec

A new generation model of Selfeeder Mechatric that has high rigidity to make a high performance with compact body.

Max. 20,000min⁻¹ | Linear guide (JP PAT.) | Multi-spindle heads attachable | Light & Compact | Variable Spindle speed variable type | Long stroke | Small dia. and deep hole drilling | Large dia. drilling

Aluminium	Steel		
φ8.5	φ6.5	SSV2	4p
φ12	φ8	SSV3	6p
φ16	φ13	SSV4	8p
φ25	φ18	SSV5	10p

Selfeeder Mechatric

Multi functionable basic unit featured with higher torque for large hole drilling and coolant center through etc.

Multi-spindle heads attachable | Variable Spindle speed variable type | Long stroke | Small dia. and deep hole drilling | Large dia. drilling | Coolant center-through | Round shaped body | Linear guide

Aluminium	Steel		
φ16	φ11	SSM4	12p
φ24	φ19	SSM5	14p
φ14	φ10	MS3P	16p
φ40	φ28	MS7	17p

CNC Turret Head

High-efficient model for intensive production to be capable for 4 different operations with single unit that is flexible for installation for new line as well as existing line as it is unit type.

Linear guide | Compact | Variable Spindle speed variable type | 4-spindle Turret | Rigid tapping

Aluminium	Steel		
φ12	φ8	4TH3S	18p
φ20	φ13	4TH5	20p
M16	M12		

Programming console, Touch panel, Computer monitoring software, Process patterns
Standrill NC, Varimotor

High-efficient deep hole drilling

Coolant center through type (Max. 6.8MPa) is available for Mechatric series for efficient deep hole drilling by oil hole drill tool.

High-flexibility

Spindle rotation speed is variable by attached inverter.
Optimize speeds to adapt to different cutting requirements.

Easy operation

5.7inch touch panel type color display (liquid crystal) makes it easy to make a CNC program and operate even for a beginner operator. Four different languages are available for the oversea usage.

Selfeeder Varimec

SSV2

Max. 20,000min⁻¹ | Linear guide (JP PAT.) | Light & Compact | Variable Spindle speed variable type

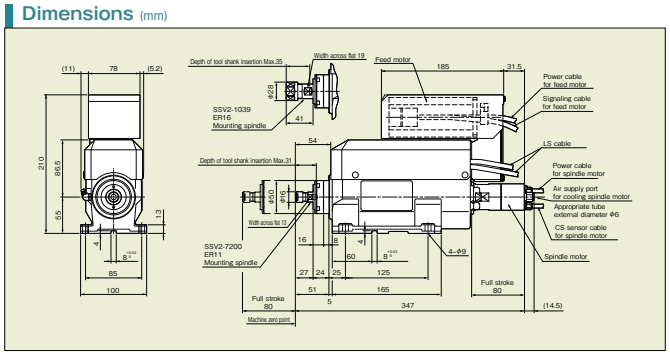
The smallest model of Varimec utilizes a high-performance motor (high-speed and high-power) into a small, compact sized body.
It provides high performance for production of small parts and small-diameter drilling.

Specification Chart

Specs. / Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size AL* (ADC)	Max. Drilling size FC* (FC200)	Max. Drilling size ST* (S45C)	Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	min⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	kg
SSV2-7200	2,000~20,000		ER11MS	0.5~7.0	5	4	3.5	Max. 80	0.9 15,000min⁻¹/hr. DC brushless motor	0.4 AC servo motor	1,200	Max. 200	Max. 16.7	15
SSV2-1039	390~3,900		ER16	0.5~10.0	8.5	7.5	6.5							

Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
3. The power voltage of the main spindle inverter is a 3-phase 200V AC±10%, 50/60Hz. (Feeding axis controller is single-phase.)
4. In the case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

Dimensions (mm)



Note : Air must be supplied to cool the spindle motor as to protect the spindle bearings. Be sure to supply clean dry air.

Adjustable spindle nose (option)

Please specify the adjustable spindle nose when ordering your servo drill.
Sugino supplies adjustable spindle noses other than those shown below, upon request.

Applicable selfeeder	Fig. No.	Spindle nose model No.
SSV2-7200	1	KH-12E
SSV2-1039	2	KH-14E

Dimensions(mm)

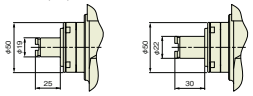
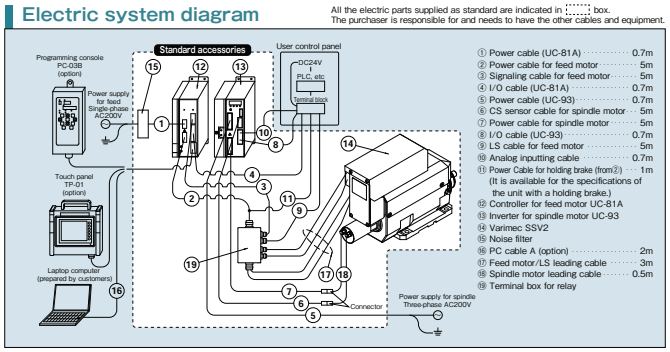


Fig. 1 KH-12E Fig. 2 KH-14E

Notes 1. Spindle noses KH-E model are applicable to the quick change stub holder of KH-A or KH-E model of NT Tool Co.,Ltd.
2. Quick change stub holder can not use in over 10,000min⁻¹ spindle speed operation.

Electric system diagram

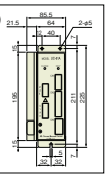
All the electric parts supplied as standard are indicated in ⬚ box.
The purchaser is responsible for and needs to have the other cables and equipment.



Notes 1. The feed controller and the spindle inverter are standard accessories.
2. The programming console and touch panel is optionally available. The attached cable is 3m long.
3. Programming from a computer is possible using a ⑯ PC cable A. In such case, a dedicated computer monitoring software is required.
Working environment: OS Windows 95/98/XP (The mode setting is necessary), Communication interface RS232C-port.

Controller for feed motor UC-81A

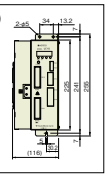
Dimensions(mm)



Dimensions (mm)/ W85.5×D168×H225
Weight/2.1kg

Inverter for spindle motor UC-93

Dimensions(mm)



Dimensions (mm)/ W116×D195.7×H255
Weight/3.2kg

Specification of signal

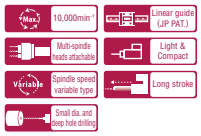
I/O	Signal	Contents
Analog Output	ORD	Command for spindle speed
	COM	Ground of command for spindle speed
Input ※1	IN0	Emergency stop
	IN1	Manual coolant ON/OFF
	IN2	Start up
	IN3	Machine zero return
	IN4	Single step
	IN5	Spindle alarm
	IN6	JOG+
	IN7	JOG−
	IN8	Forward side OT
	IN9	Backward side OT (Combine with origin LS)
	NC	No contact terminal
	IN10	Alarm clear
	IN11	EXT/MANUAL
	IN12	Manual spindle ON/OFF
	IN13	Program 1
	IN14	Program 2
	IN15	Program 4
	IN16	Program 8
	IN17	Program 10
	IN18	Program 20
	IN19	Program 40
	IN20	Program 80

I/O	Signal	Contents
Output ※2	OUT0	RDY
	OUT1	Under Auto Operation
	OUT2	Program end
	OUT3	Origin
	OUT4	Spindle ON
	OUT5	Ready for single step
	OUT6	Coolant ON
	OUT7	Forward Limit ON
	OUT8	Alarm

※1 Voltage: DC24V, Electric current: 10mA
※2 Voltage: DC24V, Electric current: 90mA

Selfeeder Varimec

SSV3



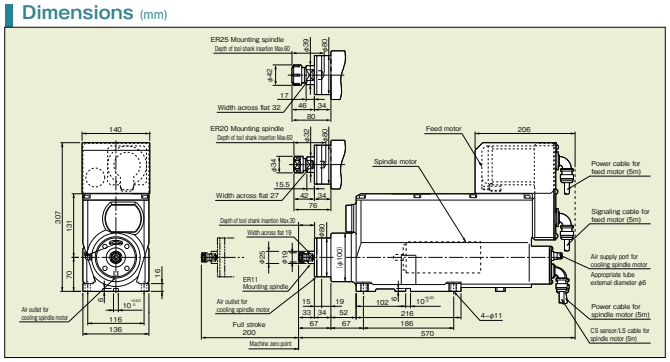
Short length, compact sized unit capable to drill small diameter and deep holes.
Well suited unit for designing/producing low cost and flexible drilling machine.

Specification Chart

Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size AL* (ADC)	Max. Drilling size FC* (FC200)	Max. Drilling size ST* (S45C)	Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	min⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	kg
SSV3-7100C	1,000~10,000		ER11	0.5~7.0	6.5	5	4	Max. 200	0.4 DC brushless motor	0.4 AC servo motor	1,660	Max. 200	Max. 16.7	43
			ER20	0.5~13.0										
SSV3-1626C	265~2,650		ER20	0.5~13.0	12	9	8							
			ER25	0.5~16.0										

Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
3. The power voltage of the main spindle inverter is a 3-phase 200V AC±10%, 50/60Hz. (Feeding axis controller is single-phase.)
4. In the case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

Dimensions (mm)



Note : Air must be supplied to cool the spindle motor as to protect the spindle bearings. Be sure to supply clean dry air.

Adjustable spindle nose (option)

Please specify the adjustable spindle nose when ordering your servo drill.
Sugino supplies adjustable spindle noses other than those shown below, upon request.

Applicable selfeeder	Fig. No.	Spindle nose model No.
SSV3-7100	1	KH-14AR
SSV3-1626	2	KH-25A

Dimensions(mm)

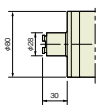
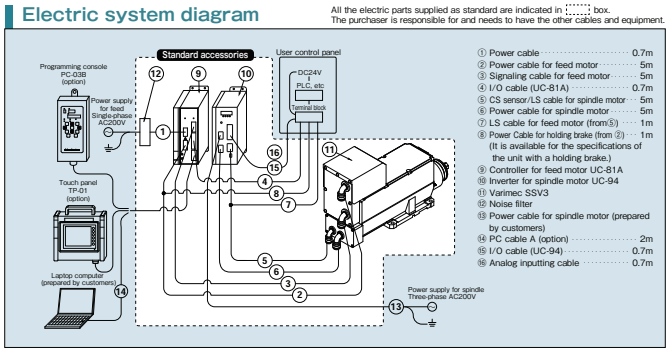


Fig. 1 KH-14AR Fig. 2 KH-25A

Note : Spindle noses KH-A model is applicable to the quick change stub holder of KH-A model of NT Tool Co.,Ltd.

Electric system diagram

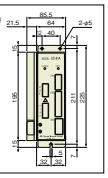
All the electric parts supplied as standard are indicated in ⬚ box.
The purchaser is responsible for and needs to have the other cables and equipment.



Notes 1. The feed controller and the spindle inverter are standard accessories.
2. The programming console and touch panel is optionally available. The attached cable is 3m long.
3. Programming from a computer is possible using a ⑭ PC cable A. In such case, a dedicated computer monitoring software is required.
Working environment: OS Windows 95/98/XP (The mode setting is necessary), Communication interface RS232C-port.

Controller for feed motor UC-81A

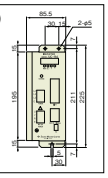
Dimensions(mm)



Dimensions (mm)/
W85.5×D168×H225
Weight/2.1kg

Inverter for spindle motor UC-94

Dimensions(mm)



Dimensions (mm)/
W85.5×D168×H225
Weight/2.1kg

Specification of signal

I/O	Signal	Contents
Analog Output	ORD	Command for spindle speed
	COM	Ground of command for spindle speed
Input ※1	IN0	Emergency stop
	IN1	Manual coolant ON/OFF
	IN2	Start up
	IN3	Machine zero return
	IN4	Single step
	IN5	Spindle alarm
	IN6	JOG+
	IN7	JOG−
	IN8	Forward side OT
	IN9	Backward side OT (Combine with origin LS)
	NC	No contact terminal
	IN10	Alarm clear
	IN11	EXT/MANUAL
	IN12	Manual spindle ON/OFF
	IN13	Program 1
	IN14	Program 2
	IN15	Program 4
	IN16	Program 8
	IN17	Program 10
	IN18	Program 20
	IN19	Program 40
	IN20	Program 80

I/O	Signal	Contents
Output ※2	OUT0	RDY
	OUT1	Under Auto Operation
	OUT2	Program end
	OUT3	Origin
	OUT4	Spindle ON
	OUT5	Ready for single step
	OUT6	Coolant ON
	OUT7	Forward Limit ON
	OUT8	Alarm

※1 Voltage: DC24V, Electric current: 10mA
※2 Voltage: DC24V, Electric current: 90mA

Selfeeder Varimec

SSV4

Linear guide (JP PAT.) | Multi-spindle heads attachable | Spindle speed variable type | Long stroke

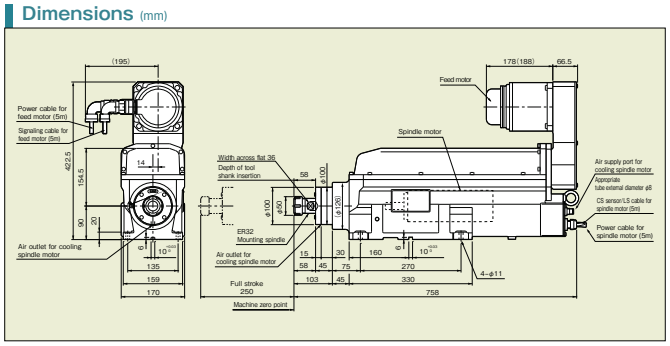
Model which has most suitable body structure for doing stepped spot-facing or burnishing drill operations.
Also it is possible to do more high-efficient processing
when you use this drill unit with multi-spindle heads.

Specification Chart

Specs. / Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size AL* (ADC)	Max. Drilling size FC* (FC200)	Max. Drilling size ST* (S45C)	Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	min-1		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	kg
SSV4-2070	1,000~7,000		ER32	1.0~20.0	9	8	7	Max. 250	1.0 DC brushless motor	1.2 AC servo motor	4,600	Max. 220	Max. 16.7	80
SSV4-2017	250~1,750				16	15	13							

Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
3. The power voltage of the feed controller and main spindle inverter is a 3-phase 200V AC±10%, 50/60Hz.
4. In the case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

Dimensions (mm)



Notes 1. In the case of a servo motor with a holding brake (optional), the dimension of the feed motor is different.
2. Air must be supplied to cool the spindle motor as to protect the spindle bearings. Be sure to supply clean dry air.

Adjustable spindle nose (option)

Please specify the adjustable spindle nose when ordering your servo drill.
Sugino supplies adjustable spindle noses other than those shown below, upon request.

Applicable selfeeder	Fig. No.	Spindle nose model No.
SSV4-2070	1	KH-22A
SSV4-2017	2	KH-32A

Dimensions(mm)

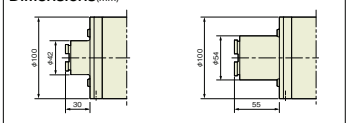
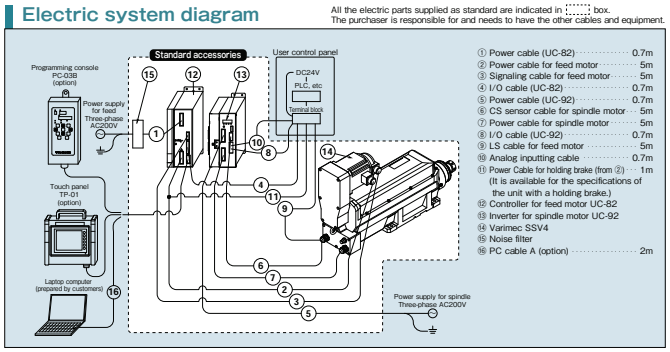


Fig. 1 KH-22A Fig. 2 KH-32A

Note : Spindle noses KH-A model is applicable to the quick change stub holder of KH-A model of NT Tool Co.,Ltd.

Electric system diagram

All the electric parts supplied as standard are indicated in ⬚ box.
The purchaser is responsible for and needs to have the other cables and equipment.

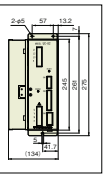


① Power cable (UC-82) ····· 0.7m
② Power cable for feed motor ····· 5m
③ Signaling cable for feed motor ····· 5m
④ I/O cable (UC-82) ····· 0.7m
⑤ Power cable (UC-92) ····· 0.7m
⑥ CS sensor cable for spindle motor ···· 5m
⑦ Power cable for spindle motor ····· 5m
⑧ I/O cable (UC-92) ····· 0.7m
⑨ LS cable for feed motor ····· 5m
⑩ Analog inputting cable ····· 0.7m
⑪ Power Cable for holding brake (from ②) ···· 1m
(It is available for the specifications of the unit with a holding brake.)
⑫ Controller for feed motor UC-82
⑬ Inverter for spindle motor UC-92
⑭ Varimec SSV4
⑮ Noise filter
⑯ PC cable A (option) ····· 2m

Notes 1. The feed controller and the spindle inverter are standard accessories.
2. The programming console and touch panel is optionally available. The attached cable is 3m long.
3. Programming from a computer is possible using a ⑯ PC cable A. In such case, a dedicated computer monitoring software is required.
Working environment: OS Windows 95/98/XP (The mode setting is necessary), Communication interface RS232C-port.

Controller for feed motor UC-82

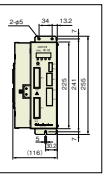
Dimensions(mm)



Dimensions (mm)/
W134×D208×H275
Weight/5.2kg

Inverter for spindle motor UC-92

Dimensions(mm)



Dimensions (mm)/
W116×D195.7×H255
Weight/3.2kg

Specification of signal

I/O	Signal	Contents
Analog Output	ORD	Command for spindle speed
	COM	Ground of command for spindle speed
Input ※1	IN0	Emergency stop
	IN1	Manual coolant ON/OFF
	IN2	Start up
	IN3	Machine zero return
	IN4	Single step
	IN5	Spindle alarm
	IN6	JOG+
	IN7	JOG−
	IN8	Forward side OT
	IN9	Backward side OT (Combine with origin LS)
	NC	No contact terminal
	IN10	Alarm clear
	IN11	EXT/MANUAL
	IN12	Manual spindle ON/OFF
	IN13	Program 1
	IN14	Program 2
	IN15	Program 4
	IN16	Program 8
	IN17	Program 10
	IN18	Program 20
	IN19	Program 40
	IN20	Program 80

I/O	Signal	Contents
Output ※2	OUT0	RDY
	OUT1	Under Auto Operation
	OUT2	Program end
	OUT3	Origin
	OUT4	Spindle ON
	OUT5	Ready for single step
	OUT6	Coolant ON
	OUT7	Forward Limit ON
	OUT8	Alarm

※1 Voltage: DC24V, Electric current: 10mA
※2 Voltage: DC24V, Electric current: 90mA

Selfeeder Varimec

SSV5

Linear guide (JP PAT.) | Multi-spindle heads attachable | Spindle speed variable type | Long stroke | Large dia. drilling

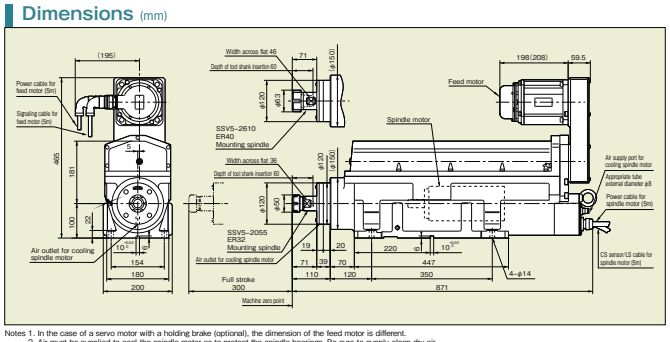
High-power model which has 1.6kW spindle motor and 7,700N thrust.
It is capable of end-mill, facing or 18mm diameter drilling operations into steel material utilizing a unique linear guide system (JP PAT.).

Specification Chart

Specs. / Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size AL* (ADC)	Max. Drilling size FC* (FC200)	Max. Drilling size ST* (S45C)	Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	min⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	kg
SSV5-2055	800~5,500		ER32	1.0~20.0	14.5	11.5	9.5	Max. 300	1.6 DC brushless motor	2.7 AC servo motor	7,760	Max. 300	Max. 16.7	100
SSV5-2610	150~1,010		ER40	2.0~30.0	25	20.5	18							

Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
3. The power voltage of the feed controller and main spindle inverter is a 3-phase 200V AC±10%, 50/60Hz.
4. In the case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

Dimensions (mm)



Notes 1. In the case of a servo motor with a holding brake (optional), the dimension of the feed motor is different.
2. Air must be supplied to cool the spindle motor as to protect the spindle bearings. Be sure to supply clean dry air.

Adjustable spindle nose (option)

Please specify the adjustable spindle nose when ordering your servo drill.
Sugino supplies adjustable spindle noses other than those shown below, upon request.

Applicable selfeeder	Fig. No.	Spindle nose model No.
SSV5-2055	1	KH-32A
SSV5-2610		

Dimensions(mm)

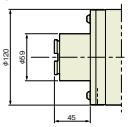
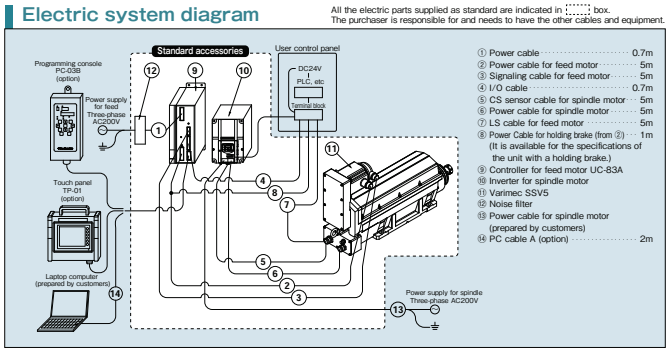


Fig. 1 KH-32A

Note : Spindle noses KH-A model is applicable to the quick change stub holder of KH-A model of NT Tool Co.,Ltd.

Electric system diagram

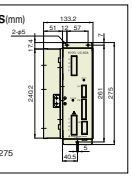
All the electric parts supplied as standard are indicated in ⬚ box.
The purchaser is responsible for and needs to have the other cables and equipment.



Notes 1. The feed controller and the spindle inverter are standard accessories.
2. The programming console and touch panel is optionally available. The attached cable is 3m long.
3. Programming from a computer is possible using a ⑭ PC cable A. In such case, a dedicated computer monitoring software is required.
Working environment: OS Windows 95/98/XP (The mode setting is necessary), Communication interface RS232C-port.

Controller for feed motor UC-83A

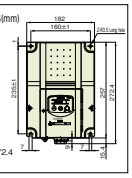
Dimensions(mm)



Dimensions (mm)/
W133.2×D216×H275
Weight/5.2kg

Inverter for spindle motor E100-075LFR2

Dimensions(mm)



Dimensions (mm)/
W182×D177×H272.4
Weight/5.7kg

Specification of signal

I/O	Signal	Contents
Analog Output	ORD	Command for spindle speed
	COM	Ground of command for spindle speed
Input ※1	IN0	Emergency stop
	IN1	Manual coolant ON/OFF
	IN2	Start up
	IN3	Machine zero return
	IN4	Single step
	IN5	Spindle alarm
	IN6	JOG+
	IN7	JOG−
	IN8	Forward side OT
	IN9	Backward side OT (Combine with origin LS)
	NC	No contact terminal
	IN10	Alarm clear
	IN11	EXT/MANUAL
	IN12	Manual spindle ON/OFF
	IN13	Program 1
	IN14	Program 2
	IN15	Program 4
	IN16	Program 8
	IN17	Program 10
	IN18	Program 20
	IN19	Program 40
	IN20	Program 80

I/O	Signal	Contents
Output ※2	OUT0	RDY
	OUT1	Under Auto Operation
	OUT2	Program end
	OUT3	Origin
	OUT4	Spindle ON
	OUT5	Ready for single step
	OUT6	Coolant ON
	OUT7	Forward Limit ON
	OUT8	Alarm

※1 Voltage: DC24V, Electric current: 10mA
※2 Voltage: DC24V, Electric current: 90mA

Selfeeder Mechatric

SSM4

Multi-spindle heads attachable
Variable Spindle speed variable type
Small dia. and deep hole drilling
Coolant center-through

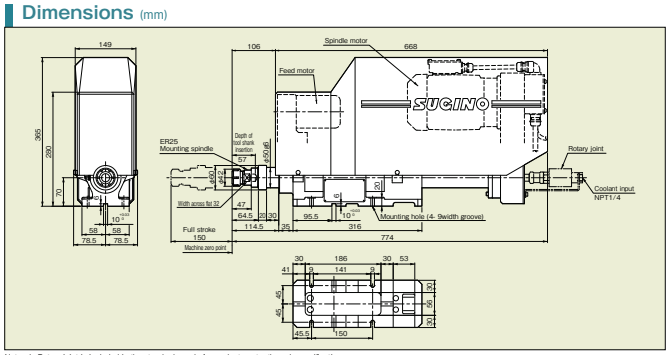
Most suitable unit for doing small diameter and deep hole drilling. The spindle rotation speed is easily adjusted in the program.
It can utilize coolant center-through tooling specification as an option for doing more high-efficient processing.

Specification Chart

Specs. / Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size AL* (ADC)	Max. Drilling size FC* (FC200)	Max. Drilling size ST* (S45C)	Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	min⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	kg
SSM4-1673	1,470~ 7,320				6	5	4		0.75 DC brushless motor Rated speed 3,600min⁻¹					
SSM4-1636	720~ 3,600		ER25	0.5~16	8	7	6	Max. 150		0.4 AC servo motor	2,320	Max. 150	Max. 16.7	60
SSM4-1618	360~ 1,800				11	9	8		0.75 DC brushless motor Rated speed 1,800min⁻¹					
SSM4-1608	180~ 880				16	12	11							

Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
3. The power voltage of the main spindle inverter is a 3-phase 200V AC±10%, 50/60Hz. (Feeding axis controller is single-phase.)
4. In the case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. "CL" is added to the end of model No. for coolant center-through specification.
6. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

Dimensions (mm)



Notes 1. Rotary joint is included in the standard supply for coolant center-through specification.
2. In case that coolant center-through specification is adopted, the figure and size of spindle noses will be changed. For details, please contact sales office.

Adjustable spindle nose (option)

Please specify the adjustable spindle nose when ordering your servo drill.
Sugino supplies adjustable spindle noses other than those shown below, upon request.

Applicable selfeeder	Fig. No.	Spindle nose model No.
SSM4-1673, SSM4-1636	1	KH-16A
SSM4-1618, SSM4-1608	2	KH-22A

Dimensions(mm)

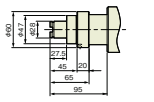


Fig. 1 KH-16A

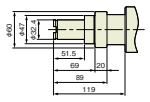
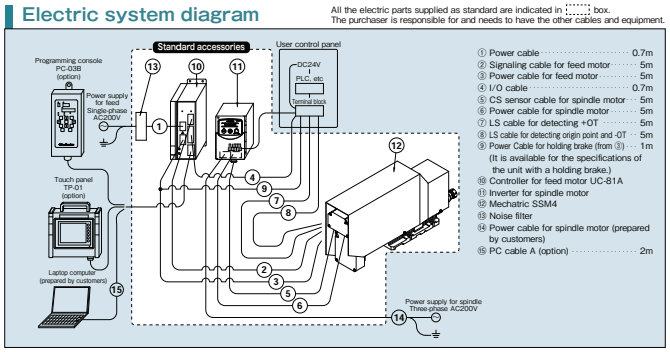


Fig. 2 KH-22A

Note : Spindle noses KH-A model is applicable to the quick change stub holder of KH-A model of NT Tool Co.,Ltd.

Electric system diagram

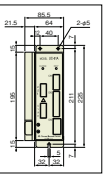
All the electric parts supplied as standard are indicated in ⬚ box.
The purchaser is responsible for and needs to have the other cables and equipment.



Notes 1. The feed controller and the spindle inverter are standard accessories.
2. The programming console and touch panel is optionally available. The attached cable is 3m long.
3. Programming from a computer is possible using a ⑮ PC cable A. In such case, a dedicated computer monitoring software is required.
Working environment: OS Windows 95/98/XP (The mode setting is necessary), Communication interface RS232C-port.

Controller for feed motor UC-81A

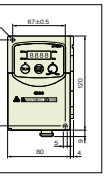
Dimensions(mm)



Dimensions (mm)/
W85.5×D168×H225
Weight/2.1kg

Inverter for spindle motor E100-007LFR2

Dimensions(mm)



Dimensions (mm)/
W84×D137×H129
Weight/0.9kg

Specification of signal

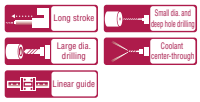
I/O	Signal	Contents
Analog Output	ORD	Command for spindle speed
	COM	Ground of command for spindle speed
Input ※1	IN0	Emergency stop
	IN1	Manual coolant ON/OFF
	IN2	Start up
	IN3	Machine zero return
	IN4	Single step
	IN5	Spindle alarm
	IN6	JOG+
	IN7	JOG−
	IN8	Forward side OT
	IN9	Backward side OT (Combine with origin LS)
	NC	No contact terminal
	IN10	Alarm clear
	IN11	EXT/MANUAL
	IN12	Manual spindle ON/OFF
	IN13	Program 1
	IN14	Program 2
	IN15	Program 4
	IN16	Program 8
	IN17	Program 10
	IN18	Program 20
	IN19	Program 40
	IN20	Program 80

I/O	Signal	Contents
Output ※2	OUT0	RDY
	OUT1	Under Auto Operation
	OUT2	Program end
	OUT3	Origin
	OUT4	Spindle ON
	OUT5	Ready for single step
	OUT6	Coolant ON
	OUT7	Forward Limit ON
	OUT8	Alarm

※1 Voltage: DC24V, Electric current: 10mA
※2 Voltage: DC24V, Electric current: 90mA

Selfeeder Mechatric

SSM5



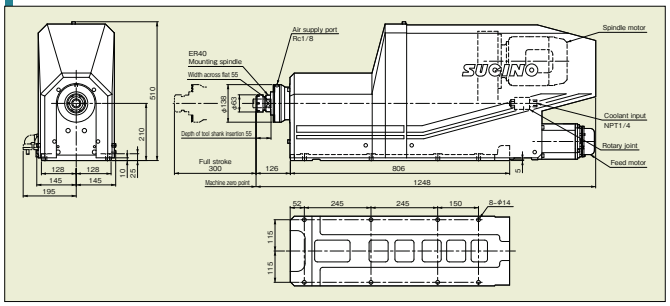
High-precision and high-rigidity unit which uses united structure of spindle unit and slide table.
It offers high-efficient deep hole drilling because of 300mm long stroke and coolant center-through system.

Specification Chart

Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size AL* (ADC)	Max. Drilling size FC* (FC200)	Max. Drilling size ST* (S45C)	Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	min⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	kg
SSM5-2641BCL	4,100	4,900	ER40	10~26	8	4	4	Max. 300	2.2 Induction motor	2.7 AC servo motor	5,000	Max. 300	Max. 16.7	230
SSM5-2634BCL	3,400	4,000			9	5	5							
SSM5-2625BCL	2,500	3,000			12	6	6							
SSM5-2621BCL	2,100	2,500			10	5	5		1.5 Induction motor					
SSM5-2617BCL	1,700	2,000			12	6	6							
SSM5-2611BCL	1,100	1,300			16	9	8							
SSM5-2607BCL	700	850			19	14	12.5							
SSM5-2604BCL	400	480			19	15	13.5		0.75 Induction motor					
SSM5-2602BCL	220	260			24	21	19							

Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
3. The power voltage of the feed controller and main spindle inverter is a 3-phase 200V AC±10%, 50/60Hz.
4. Holding brake is attached to the feed motor.
5. Coolant center-through is used for SSM5 as standard specification. Please direct if you do not need it.
6. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

Dimensions (mm)



Note : Rotary joint attaches to SSM5 as standard.

Adjustable spindle nose (option)

Please specify the adjustable spindle nose when ordering your servo drill.
Sugino supplies adjustable spindle noses other than those shown below, upon request.

Applicable selfeeder	Fig. No.	Spindle nose model No.
SSM5-26**BCL	1	KH-32EC

Dimensions(mm)

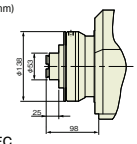
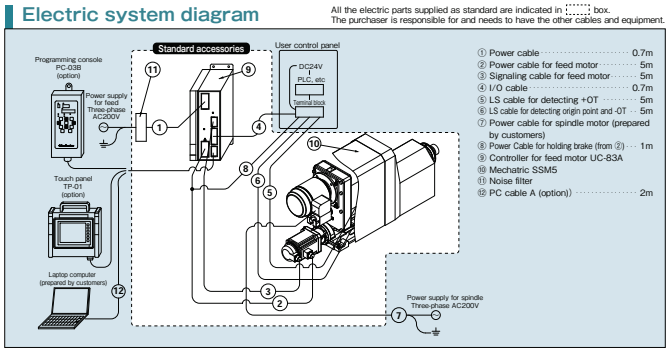


Fig. 1 KH-32EC

Note : Spindle noses KH-EC model is applicable to the quick change stub holder of KH-EC model of NT Tool Co.,Ltd.

Electric system diagram

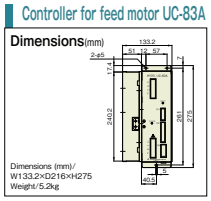
All the electric parts supplied as standard are indicated in ⬚ box.
The purchaser is responsible for and needs to have the other cables and equipment.



Notes 1. The feed controller is standard accessories.
2. The programming console and touch panel is optionally available. The attached cable is 3m long.
3. Programming from a computer is possible using a ㉜ PC cable A. In such case, a dedicated computer monitoring software is required.
Working environment: OS Windows 95/98/XP (The mode setting is necessary), Communication interface RS232C-port.

Controller for feed motor UC-83A

Dimensions(mm)



Dimensions (mm)/
W133.2×D216×H275
Weight/5.2kg

Specification of signal

I/O	Signal	Contents
Input ※1	IN0	Emergency stop
	IN1	Manual coolant ON/OFF
	IN2	Start up
	IN3	Machine zero return
	IN4	Single step
	IN5	Spindle alarm
	IN6	JOG+
	IN7	JOG−
	IN8	Forward side OT
	IN9	Backward side OT (Combine with origin LS)
	NC	No contact terminal
	IN10	Alarm clear
	IN11	EXT/MANUAL
	IN12	Manual spindle ON/OFF
	IN13	Program 1
	IN14	Program 2
	IN15	Program 4
	IN16	Program 8
	IN17	Program 10
	IN18	Program 20
	IN19	Program 40
	IN20	Program 80

I/O	Signal	Contents
Output ※2	OUT0	RDY
	OUT1	Under Auto Operation
	OUT2	Program end
	OUT3	Origin
	OUT4	Spindle ON
	OUT5	Ready for single step
	OUT6	Coolant ON
	OUT7	Forward Limit ON
	OUT8	Alarm

※1 Voltage: DC24V, Electric current: 10mA
※2 Voltage: DC24V, Electric current: 90mA

Selfeeder Mechatric

MS3P

Multi-spindle heads attachable
Small dia. and deep hole drilling
Round shaped body

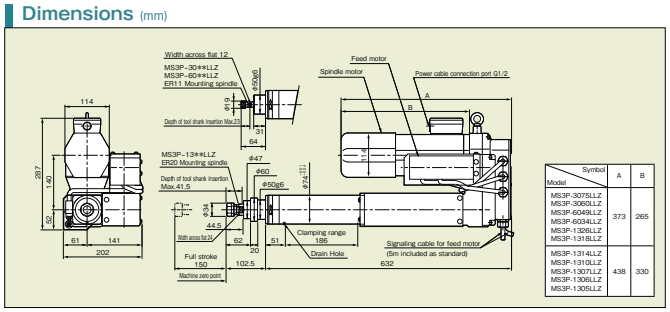
Most suitable unit for doing small diameter/deep hole drilling or high-precision drilling with carbide tooling.
Easy unit replacement on operations originally utilizing Selfeeder "Electric" types because it uses the same "circular body style".

Specification Chart

Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size AL* (ADC)	Max. Drilling size FC* (FC200)	Max. Drilling size ST* (S45C)	Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	min⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	kg
MS3P-3075LLZ	7,500	9,000	ER11	0.5~7	3	1.5	1.5	150	0.35 2P Induction motor	0.4 AC servo motor	1,760	Max. 200	Max. 16.7	34
MS3P-3060LLZ	6,000	7,200			4	1.5	1.5							
MS3P-6049LLZ	4,900	5,900			5	2	2							
MS3P-6034LLZ	3,400	4,100			7	3	3							
MS3P-1326LLZ	2,600	3,200	ER20	0.5~13	7.5	3.5	3.5							
MS3P-1318LLZ	1,800	2,200			8.5	5	4							
MS3P-1314LLZ	1,400	1,700			9.5	6	6		0.35 6P Induction motor					35
MS3P-1310LLZ	1,000	1,200			10	8	7							
MS3P-1307LLZ	700	800			12	9	8							
MS3P-1306LLZ	600	700			13.5	10.5	9							
MS3P-1305LLZ	500	600			14	12	10							

Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
3. The power voltage of the main spindle motor is a 3-phase 200V AC±10%, 50/60Hz. (Feeding axis controller is single-phase.)
4. In the case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

Dimensions (mm)



Model	A	B
MS3P-3075LLZ MS3P-3060LLZ MS3P-6049LLZ MS3P-6034LLZ MS3P-1326LLZ MS3P-1318LLZ	373	265
MS3P-1314LLZ MS3P-1310LLZ MS3P-1307LLZ MS3P-1306LLZ MS3P-1305LLZ	438	330

Note : Please do not clamp over or plug the drain hole, and install the selfeeder to adjust the drain hole facing down.

Selfeeder Mechatric

MS7

Multi-spindle heads attachable
Long stroke
Large dia. drilling

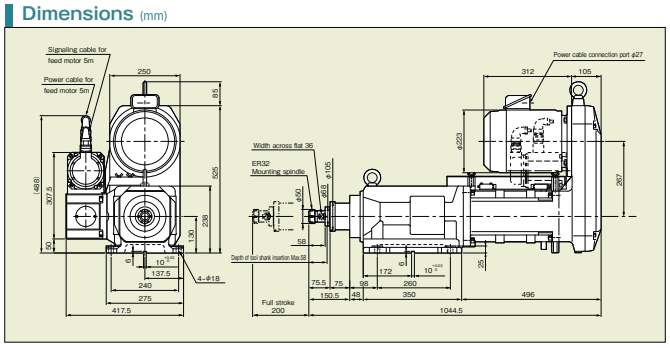
High-power model which has a 3.7kW spindle motor and 7,800N thrust.
It can do facing, end-milling and 28mm diameter drilling operations into steel material.

Specification Chart

Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size AL* (ADC)	Max. Drilling size FC* (FC200)	Max. Drilling size ST* (S45C)	Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	min⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	kg
MS7-3229	2,900	3,500	ER32	1.0~20	11	4	3	200	3.7 4P Induction motor	2.7 AC servo motor	7,800	Max. 298	Max. 16.7	270
MS7-3222	2,200	2,700			13	5	4							
MS7-3215	1,500	1,800			17	7	6							
MS7-3210	1,000	1,200			20	14	12		2.2 6P Induction motor					
MS7-3206	650	800			25	19	16							
MS7-3205	500	600			31	24	21							
MS7-3203	340	410			40	32	28							

Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
3. The power voltage of the feed controller and main spindle motor is a 3-phase 200V AC±10%, 50/60Hz.
4. In the case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

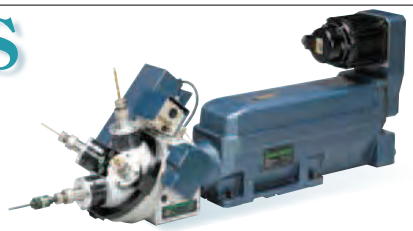
Dimensions (mm)



CNC Turret Head

4TH3S

Linear guide (JP PAT.) | Compact | Variable Spindle speed variable type | 4-spindle Turret



Compact sized turret which uses a Selfeeder "Varimec" as a drive unit. It has a tool change function so 1 machine can do 4 types of operations.
Also it is useful for using by "automatic drilling machine style with tool change system".

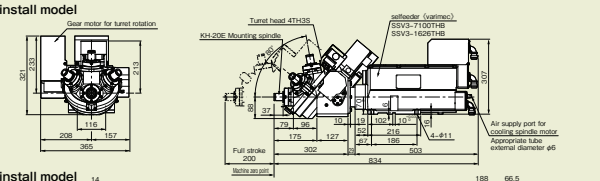
Specification Chart

Specs. / Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size AL* (ADC)	Max. Drilling size FC* (FC200)	Max. Drilling size ST* (S45C)	Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Indexing time 50Hz	Indexing time 60Hz	Weight
	min⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	sec	sec	kg
4TH3S + SSV3-7100THB	1,000~ 7,000		Stub holder [KH-20E NT tool]	2.6~9.0	6.5	5	4	Max. 200	0.4 DC brushless motor	0.4 AC servo motor	1,660	Max. 200	Max. 16.7	0.9	0.8	73
4TH3S + SSV3-1626THB	265~ 2,650				12	9	8									
4TH3S + SSV4-2070THB	1,000~ 7,000				9	8	7	Max. 250	1.0 DC brushless motor	1.2 AC servo motor	4,600	Max. 220				110

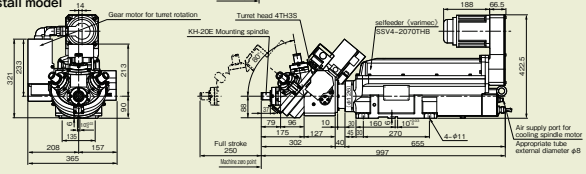
Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
3. Indexing time is the time for turret rotation. It does not including the time of spindle start and stop.
4. When you install this turret head into SSV3-7100THB, please set "under 7,000min⁻¹" for spindle rotation speed.
5. Holding brake is attached to the feed motor.
6. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

Dimensions (mm)

SSV3 install model



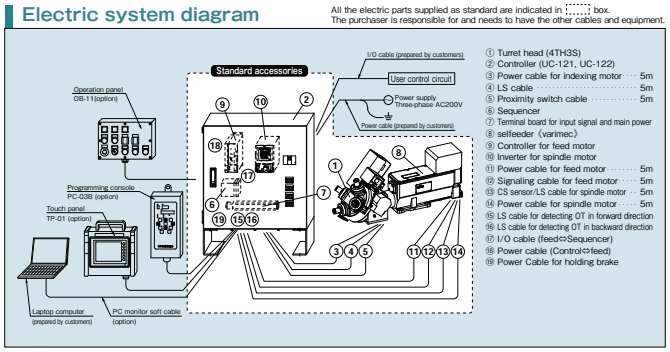
SSV4 install model



Note : Air must be supplied to cool the spindle motor as to protect the spindle bearings. Be sure to supply clean dry air.

Electric system diagram

All the electric parts supplied as standard are indicated in ⬚ box.
The purchaser is responsible for and needs to have the other cables and equipment.



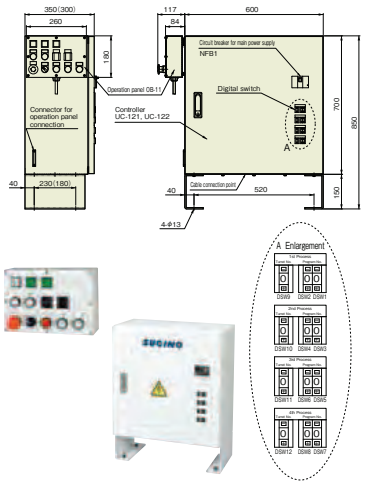
① Turret head (4TH3S)
② Controller (UC-121, UC-122)
③ Power cable for indexing motor ····· 5m
④ LS cable ····· 5m
⑤ Proximity switch cable ····· 5m
⑥ Sequencer
⑦ Terminal board for input signal and main power
⑧ selfeeder〈varimec〉
⑨ Controller for feed motor
⑩ Inverter for spindle motor
⑪ Power cable for feed motor ····· 5m
⑫ Signaling cable for feed motor ····· 5m
⑬ CS sensor/LS cable for spindle motor ··· 5m
⑭ Power cable for spindle motor ····· 5m
⑮ LS cable for detecting OT in forward direction
⑯ LS cable for detecting OT in backward direction
⑰ I/O cable (feed⇔Sequencer)
⑱ Power cable (Control⇔feed)
⑲ Power Cable for holding brake

Notes 1. Operation panel, the programming console and touch panel is optionally available. The attached cable is 3m long.
2. Programming from a computer is possible using a PC monitor soft cable. In such case, a dedicated computer monitoring software is required.
Working environment: OS Windows 95/98/XP (The mode setting is necessary), Communication interface RS232C-port.
3. Turret rotation can operate from operation panel only. It is impossible for doing turret rotation from programming console, pouch panel and PC monitor software.

Operation panel and Controller

Dimensions(mm)

Operation panel OB-11 Controller UC-121 (for SSV3) UC-122 (for SSV4)



Notes 1. UC-121 attaches to 4TH3S+SSV3 series and UC-122 attaches to 4TH3S+SSV4 series as standard.
2. These dimensions are for UC-122. Inside of brackets ( ) indicates dimensions for UC-121.

Specification of signal

I/O	Signal	Contents
Input ※1	X110	Power "ON"
	X111	Machine zero return
	X112	Emergency stop
	X113	Alarm clear
	X114	Start up
	X115	Turret Indexing
	X116	Spare
	X117	Spare
Output ※2	Y50	All origin position
	Y51	Selfeeder Origin
	Y52	Turret cam Origin
	Y53	Program end
	Y54	Alarm
	Y55	Run
	Y56	Spare
	Y57	Spare
Power	+24V	External I/O power DC24V
	0V	External I/O power 0V

※1 Voltage: DC24V±10%, Electric current: less or equal 7mA
※2 Voltage: DC24V, Electric current: less or equal 100mA

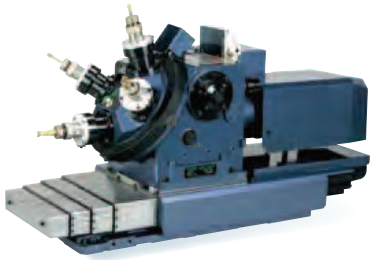
Application

Automatic drilling machine utilizing 4TH3S

CNC Turret Head

4TH5

Linear guide | Variable Spindle speed variable type | 4-spindle Turret | Rigid tapping



Designed to integratge onto space-saving and high-efficient production machines,
the versatile it can combine plural kinds of process like facing, drilling, chamfering, tapping and other kinds of processing.

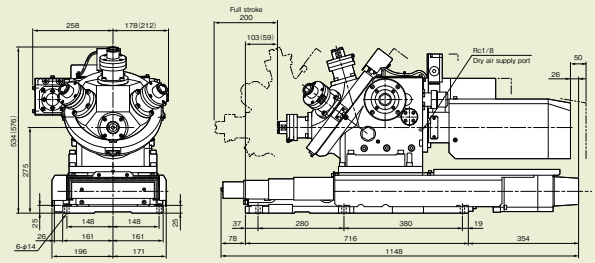
Specification Chart

Specs. / Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling/Tapping size AL* (ADC)	Max. Drilling/Tapping size FC* (FC200)	Max. Drilling/Tapping size ST* (S45C)	Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Indexing time 50Hz	Indexing time 60Hz	Weight
	min⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	sec	sec	kg
4TH5-1660	Max.6,000		Stub holder [KH-25E / NT tool]	3.6~16.0	14	11	9.5	Max. 200	2.0 AC servo motor	1.2 AC servo motor	Max. 1,960	Max. 500	1.2	1.0	260
					M10	M8	M8								
4TH5-1612	Max.1,200				20	15	13								280
					M16	M12	M12								

Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The upper row of the maximum drilling/tapping capacity section shows the maximum drilling capacity. And lower row shows the maximum tapping capacity.
3. The drilling capacity shown above is for a depth equivalent to the drill diameter times two. A spiral type or point type tapping tool is used for the tapping capacity section. Tapping capacities are conditional on the depth of tapping being limited to 1.5 times the tap diameter.
4. Holding brake is attached to the feed motor.
5. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

Dimensions (mm)

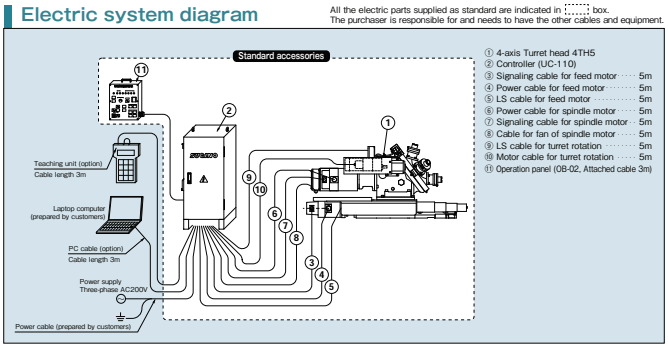
4TH5-1660



Notes 1. For protecting the inside structure, please input dry air for air-purge from Rc1/8.
2. Parenthesized numbers are showing the dimensions of 4TH5-1612.

Electric system diagram

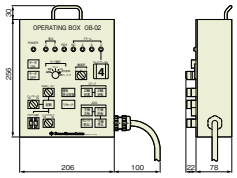
All the electric parts supplied as standard are indicated in ⋯ box.
The purchaser is responsible for and needs to have the other cables and equipment.



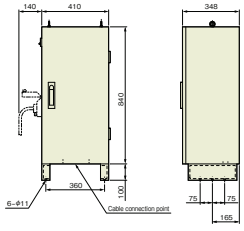
Operation panel and Controller

Dimensions(mm)

Operation panel OB-02



Controller UC-110



Specification of Controller

Model No.		NCBOY~200
Controlled axes		1 axis (Z axis) + S axis
NC Program ※1	Input commands	Least input increment : 0.001mm
		Least command increment : 0.001mm
		Max. programmable dimension : 999999999.999mm
		Decimal point input.
		Cutting feed rate : F mm/min direct command
	G function (Any other G code can not accept except right G code)	G00 Positioning / G31 Skip function
		G01 Liner interpolation / G53 Command in machine coordinate system
		G04 Dwell / G90 Absolute command
		G09 Positioning check / G91 Incremental command
		G11 Time-fixed feeding / G92 Coordinate system setting
		G28 Automatic return to reference point
	M function (For external output)	M50~M57 : Codes for customer.
	Special function	RTAPX Tapping.
	S function	Command spindle speed, rotation start and stop.
	T function	Command assignment turret No. and turret index start.
	Various calculate function	○(Available in NC program.)
	Confirm NC status, Setting or reference I/O parameter	○(Available only in NC program.)
	Use of register	○(Available for coordinate address.)
	Macro command	×
	Canned cycle	×
	Tool life management	×
Description for components	Operation panel	Using in case of manual operation.
	Teaching unit ※1	·Inputting, reference and changing the NC program. ·Reference and Changing the parameter of NC program and amplifier. ·Monitoring the operating conditions of NC program and amplifier.
	PC software	
External I/O signal	Output signal ※2	Machine zero return.
		Servo motor ON.
		Cycle run.
		Program end.
		Alarm
		M50~M57 : Codes for customer.
	Input signal ※3	Automatic operation start.
		External emergency stop.
		Reset
		Program No.1 (Assign program No.)
		Program No.2 (Assign program No.)
		Program No.4 (Assign program No.)
		Program No.8 (Assign program No.)
		Program No.10 (Assign program No.)
		Program No.20 (Assign program No.)
		Program No.40 (Assign program No.)
		Program No.80 (Assign program No.)
		M code FIN.

※1 NC programming is recommended to use together with PC software.
※2 Voltage : DC24V, current : less or equal 40mA.
※3 Voltage : DC24V±10%, current : less or equal 40mA.

Data input system

Sugino's program input system; high-efficiency and easy-operation.

Processing program inputting method (Option)

For controller UC-81A, 82 and 83A, Sugino has **3 options** for inputting data, confirming the condition, single unit manual operating, and seeing alarms.

1 Programming console PC-03B

Key input small sized monitor type

Compact sized and light weight monitor which can set the stroke and spindle rotation speed in a one touch operation. With minimal key strokes quickly input programs.

Attached cable (3m)

2 Touch panel TP-01

Easy operation by touch panel

5.7inch color type liquid crystal pouch panel. Beginners are also able to produce and operate CNC programs very easily.

Indicate language:
→Japanese, English, Chinese and Korean
Attached cable (3m)
Back up memory (Option):
→Compact flash card (32MB)
→Compact flash reader writer

3 PC monitor soft

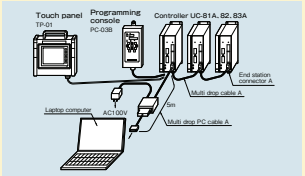
Programming operation from your PC

Use exclusive type monitor software which can do programming operation from your PC. Special cable for connecting with your PC is required.

Working environment
→OS Windows 95/98/XP (The mode setting is necessary)
Communication interface
→RS232C-port

■Multi drop connection

By connecting multiple controllers with multi drop cable, programming can be achieved without pulling out cables. (Maximum 10 controllers are connected.)



Process patterns

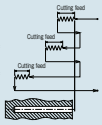
14 process patterns included in the UC-8* Controller.
Simply choose suitable pattern for your processing specification.

Pattern No.	Function
01	Drilling
02	High-speed deep hole drilling (Step feed drilling)
03	Deep hole drilling (Step feed drilling)
04	Quill pipe drilling (Skip feed drilling)
05	Drilling Counterboring
06	Drilling (with inching feed)
07	High-speed deep hole drilling (with inching feed)
08	Deep hole drilling (with inching feed)
09	Quill pipe drilling (with inching feed)
10	Drilling Counterboring (with inching feed)
11	Back chamfering
12	Quill pipe multi-step drilling (with inching feed)
13	2-step front/rear chamfering
15	Non-step deep hole drilling

●Example of process patterns

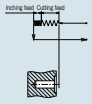
No.03 Deep hole drilling (Step feed drilling)

Applied for Deep hole drilling, generally referred to as step drilling. Cutting oil delivered to edge of drill bit because the drill bit is pulled out of workpiece in each step motion.



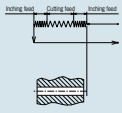
No.05 Drilling Counterboring

Applied to perform counterboring after drilling. Also applied to reduce burns on the rear surface at through hole drilling.



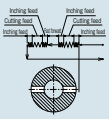
No.06 Drilling (with inching feed)

Applied to reduce burns on the both front and rear surface.



No.09 Quill pipe drilling (with inching feed)

Capable of inching feed for process pattern No.4 when drill biting and through-hole are performed.
Helps to reduce burrs.



Other attachments

Additional Sugino products which can achieve high-efficient operations besides Selfeeder servo series.

NC automatic drilling machine Standrill NC

All that is needed for operation on the same day is a connection with the main power supply. This is an NC automatic drilling machine available not only for drilling but also tapping. An optional touch panel allows easy operation of NC programs even if the user is a beginner.

High rigidity spindle motor Varimotor

The same high-rigidity and high-power DC brushless motor and precise angular bearing as the Selfeeder Varimec are utilized. It is compact sized spindle unit and capable of doing heavy cut processing.

Application

1. Install into spindle unit for drilling and end-milling operation
2. Install into robot for de-burring operation.
3. Install into special purpose machine for various cutting operations.

Specification Chart

Specs. / Model	Spindle speed (no load) 50Hz	Spindle speed (no load) 60Hz	Chuck type (Collet chuck)	Chucking capacity	Max. Drilling size AL* (ADC)	Max. Drilling size FC* (FC200)	Max. Drilling size ST* (S45C)	Spindle motor	Weight
	min⁻¹		—	mm	mm	mm	mm	kW	kg
SSV2-7200CM	2,000~20,000		ER11MS	0.5~7.0	5	4	3.5	0.9	4
SSV2-1039CM	390~ 3,900		ER16	0.5~10.0	8.5	7.5	6.5		
SSV3-7100CM	1,000~10,000		ER11	0.5~7.0	6.5	5	4	0.4	12
			ER20	0.5~13.0					
SSV3-1626CM	265~ 2,650		ER20	0.5~13.0	12	9	8		
			ER25	0.5~16.0					
SSV4-2070CM	1,000~ 7,000		ER32	1.0~20.0	9	8	7	1.0	24
SSV4-2017CM	250~ 1,750				16	15	13		
SSV5-2055CM	800~ 5,500		ER32	1.0~20.0	14.5	11.5	9.5	1.6	43
SSV5-2610CM	150~ 1,010		ER40	2.0~30.0	25	20.5	18		

Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed.(cutting speed)
2. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
3. The power voltage is a 3-phase 200V AC±10%, 50/60Hz.
4. For cooling the motor in inside, please input clean dry air into air-inlet.
5. Please take care for not closing the air-outlet for motor cooling by clamp fixture etc. Also please set the air-outlet certainly becomes downward.
6. The leading direction of cable is different from the type of Varimotor. If you need more detailed information, please ask your nearest sales offices.
7. AL*···Aluminium, FC*···Cast Iron, ST*···Steel

Dimensions(mm)

Fig.1 (SSV2CM)

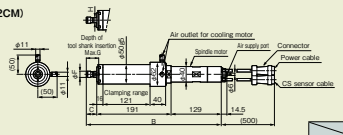
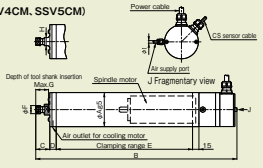


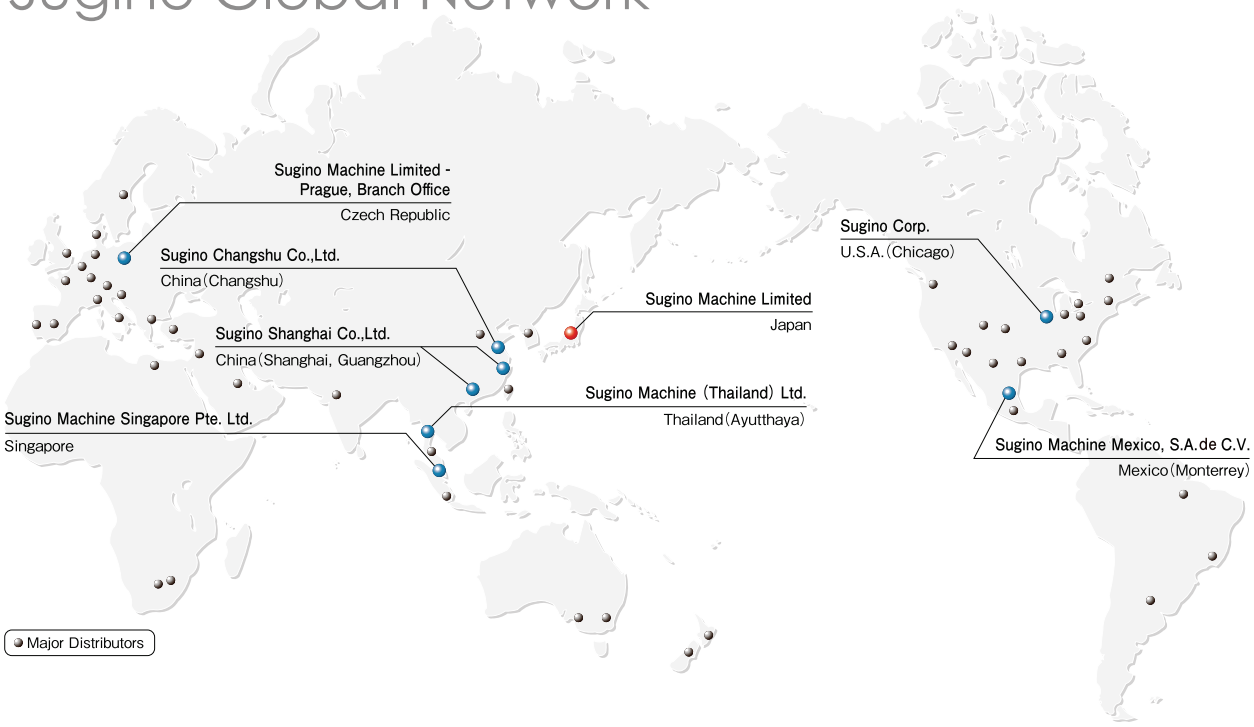
Fig.2 (SSV3CM, SSV4CM, SSV5CM)



Model \ Symbol	Fig. No.	A	B	C	D	E	F	G	H	I
SSV2-7200CM	1	–	347	27	–	–	16	31	13	–
SSV2-1039CM			361	41			28	35	19	
SSV3-7100CM	2	80	473	33	15	320	19	30	19	6
			482	42			34	60	27	
SSV3-1626CM			486	46			42		32	
SSV4-2070CM		100	659.5	58		454.5	50	58	36	8
SSV4-2017CM										
SSV5-2055CM		120	807.5	71	19	519	63	60	46	
SSV5-2610CM										

Note : The B, C, F, G and H dimension in this drawing will changes with the spindle specification which shown in the above capacity table.

Sugino Global Network



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