



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 achieve high-precision, high-efficient, space saving, and cost reduction required for machining lines.

Features of
SELFEEDER
SERVO series

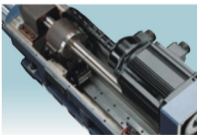
High Quality Drilling

The fluctuation of the feed speed is eliminated by the precise angular bearing supporting spindle and the high quality ball screw. As a result, the generator of burr is reduced and a lifetime of a tool is prolonged.



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 for stepped hole drilling and burnished drilling. (JP PAT.)



Highly-efficient Deep Hole Drilling
"MECH-ATR C", one of our series (Max 6.8MPa) which is compatible with coolant fed drill is available. Oil hole drilling tool allows highly-efficient deep hole drilling.

High-flexibility

The speed of spindle rotation could be adjusted as desired with an inverter a standard accessory which provide most suitable cutting conditions and allow to flexibly respond to part design change



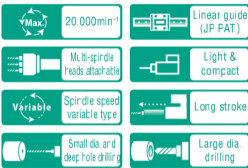
Easy Operation

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 overseas usage.



SELFEEDER VARIMEC

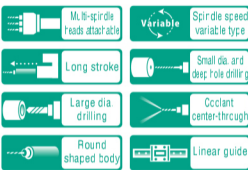
A new generation model of SELFEEDER MECHATRIC that has high rigidity to make a high-performance with compact body.



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

SELFEEDER MECHATRIC

Multifunctional basic unit featured with higher torque for large hole drilling and coolant center through.



Aluminium φ16	Steel φ11	SSM4	12p
Aluminium φ24	Steel φ19	SSM5	14p
Aluminium φ16	Steel φ11	MSC	6p
Aluminium φ14	Steel φ10	MS3P	8p
Aluminium φ40	Steel φ28	MS7	20p

SELFEEDER DUAL

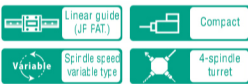
The model employs servo motors for feed and rotation. One unit can be used for both drilling and tapping.



Aluminium φ26	Steel φ20	MS6-DS	22p
Aluminium M27	Steel M18		

CNC TURRET HEAD

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



Aluminium φ12	Steel φ8	4TH3S	24p
Aluminium M10	Steel M6		

Data Input System / Other Attachable Products

Touch Panel, VARIMOTOR

26 27p

Max. Drilling Size (mm)

Aluminum
φ8.5

Steel
φ6.5

SELFEEDER VARIMEC

SSV2

 20,000min⁻¹

 Linear guide (JP PAT.)

 Light & compact

 Spindle speed variable type



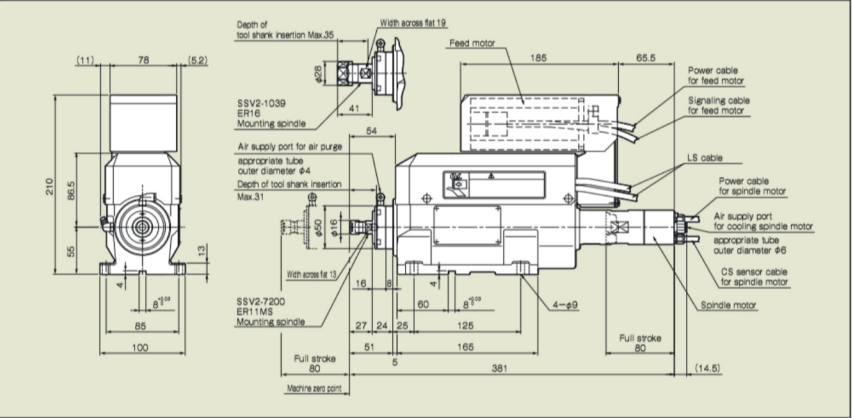
The smallest model of VARIMEC utilizes a high-performance motor (high-speed and high-power) into a small, compact sized body.
It provides high-performance for production of small parts and small-diameter drilling.

Specification Chart

Specs.	Spindle speed (no load)		Chuck type (Collet chuck)	Chuck capacity mm	Max. drilling size			Stroke mm	Spindle motor kW	Feed motor kW	Thrust N	Rapid approach speed mm/sec	Cutting speed mm/sec	Weight kg
	50Hz	60Hz			AL* (ADC)	FC* (FC200)	ST* (S45C)							
Model	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 (at 15,000min ⁻¹) 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 spindle inverter is a 3-phase 200V AC±10%, 50/60Hz. (Feeding axis controller is single-phase.)
4. In case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. AL:~Aluminum, FC:~Cast Iron, ST:~Steel

Dimensions(mm)



Note: Always supply dry air to the spindle motor cooling air (supply air pressure: 0.3 MPa) and air for air purge (supply air pressure: 0.05 MPa).

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)

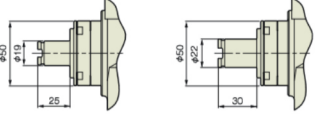
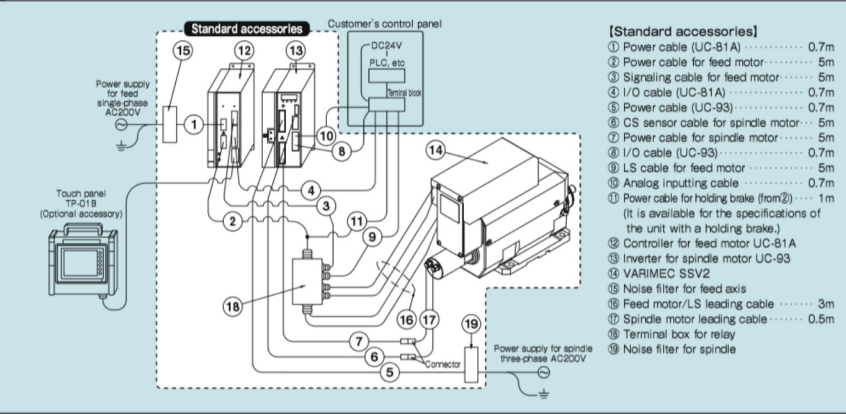


Fig. 1 KH-12E Fig. 2 KH-14E

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. If the spindle speed exceeds 10,000min⁻¹, the quick stub holder is not applied.

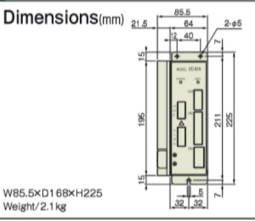
Electrical System Diagram

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.

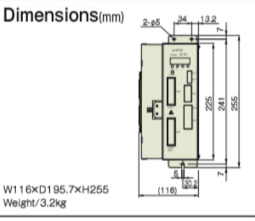


Notes 1. The feed controller and the spindle inverter are standard accessories.
2. In order to perform data input and to display various monitors and alarms, the optional touch panel TP-01B type is required. The attached cable is 3m long. Please refer to page 26 for details.

Controller for Feed Motor UC-81A



Inverter for Spindle Motor UC-93



Specification of Signal

I/O	Signal	Contents
Analog output	ORD	Command for spindle speed
	COM	Ground of command for spindle speed
	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-
Input #1	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
Output #2	OUT0	RDY
	OUT1	Under auto operation
	OUT2	Program end
	OUT3	Origin
Output #2	OUT4	Spindle ON
	OUT5	Ready for single step
	OUT6	Coolant ON
	OUT7	Forward limit ON
Output #2	OUT8	Alarm

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

SELFEEDER VARIMEC

SSV3

- Max

10,000min⁻¹
- Linear guide

(J.P. PAT.)
- Multi-spindle

heads attachable
- Light &

compact
- Variable

Spindle speed

variable type
- Long stroke
- Small dia. and

deep hole drilling



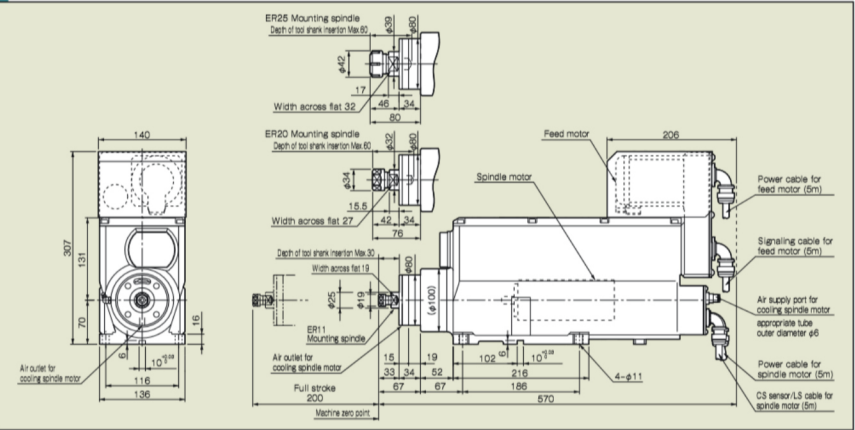
Short length, compact sized unit capable to drill small diameter and deep holes.
Well suited unit for designing/producing low cost and flexible drilling machine.

Specification Chart

Specs.	Spindle speed (no load)		Chuck type (Collet chuck)	Chuck capacity	Max. drilling size			Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	50Hz	60Hz			AL* (ADC)	FC* (FC200)	ST* (S45C)							
Model	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		43
			ER20	0.5~13.0										
SSV3-1626C	265~ 2,650		ER20	0.5~13.0	12	9	8	Max. 200	0.4 DC brushless motor	0.4 AC servo motor	1,660	Max. 200		43
			ER25	0.5~16.0										

Notes 1. To select your model, refer to the workplace 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 spindle inverter is a 3-phase 200V AC±10%, 50/60Hz. (Feeding axis controller is single-phase.)
4. In case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. AL~Aluminum, FC~Cast Iron, ST~Steel

Dimensions(mm)



Note : Air must be supplied to cool the spindle motor in order 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)

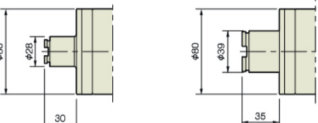


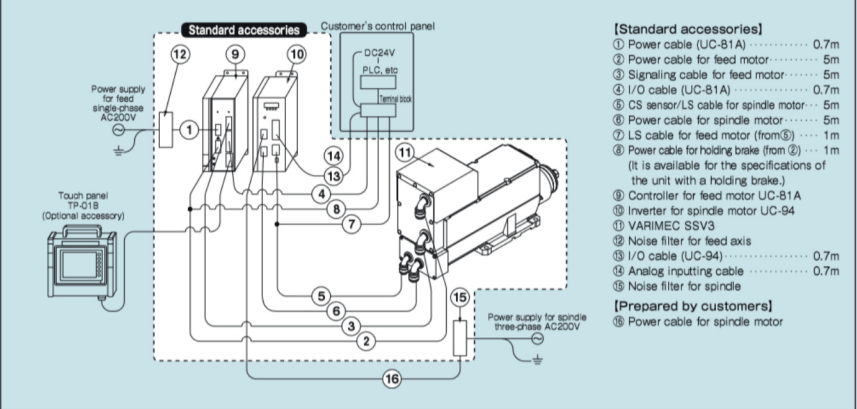
Fig. 1 KH-14AR

Fig. 2 KH-25A

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

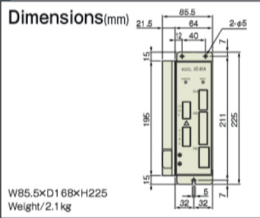
Electrical System Diagram

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.

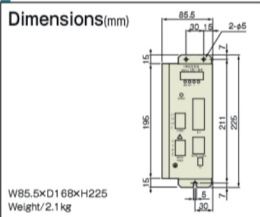


Notes 1. The feed controller and the spindle inverter are standard accessories.
2. In order to perform data input and to display various monitors and alarms, the optional touch panel TP-01B type is required. The attached cable is 3m long. Please refer to page 26 for details.

Controller for Feed Motor UC-81A



Inverter for Spindle Motor UC-94



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
Output #2	OUT0	RDY
	OUT1	Under auto operation
	OUT2	Program end
	OUT3	Origin
	OUT4	Spindle ON
	OUT5	Ready for single step
	OUT6	Coolant ON
Output #2	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



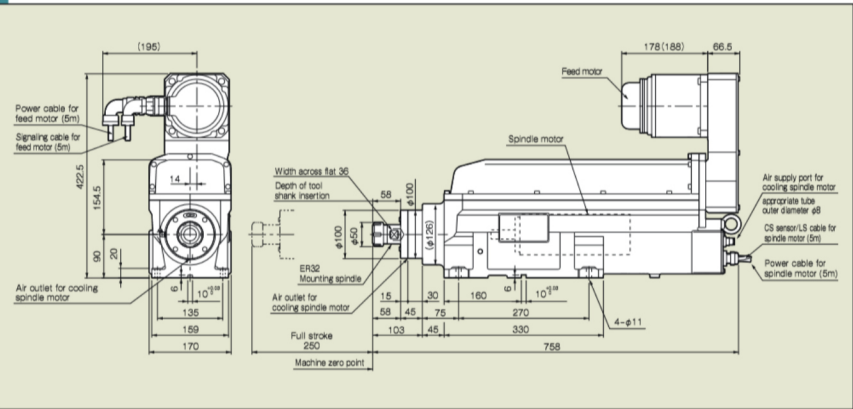
Model which has the most suitable body structure for stepped spot-facing or burnishing drill operations. Also it is possible to do more high-efficient processing when you use this drill unit with multi-spindle heads.

Specification Chart

Specs.	Spindle speed (no load)		Chuck type (Collet chuck)	Chucking capacity	Max. drilling size			Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	50Hz	60Hz			AL* (ADC)	FC* (FC20)	ST* (S45C)							
Model	min ⁻¹		—	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	12 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 workplace 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 spindle inverter is a 3-phase 200V AC±1.0%, 50/60Hz.
4. In 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 in order 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)

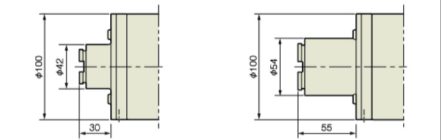
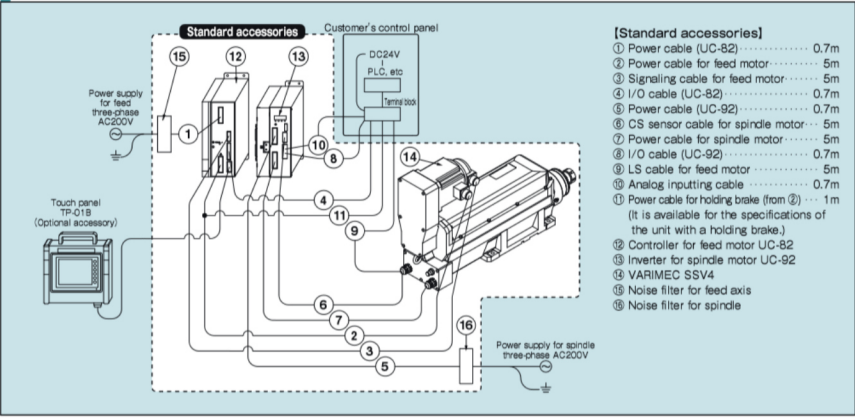


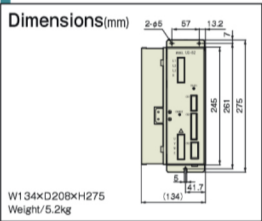
Fig. 1 KH-22A Fig. 2 KH-32A
Note : Spindle noses KH-A model is applicable to the quick change stub holder of KHA model of NT Tool Co.,Ltd.

Electrical System Diagram

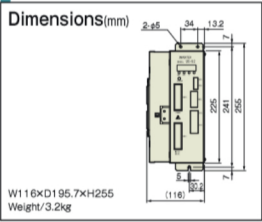


Notes 1. The feed controller and the spindle inverter are standard accessories.
2. In order to perform data input and to display various monitors and alarms, the optional touch panel TP-01B type is required. The attached cable is 3m long. Please refer to page 26 for details.

Controller for Feed Motor UC-82



Inverter for Spindle Motor UC-92



Specification of Signal

I/O	Signal	Contents
Analog output	ORD	Command for spindle speed
	COM	Ground of command for spindle speed
	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-
Input #1	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
Output #2	OUT0	RDY
	OUT1	Under auto operation
	OUT2	Program end
	OUT3	Origin
Output #2	OUT4	Spindle ON
	OUT5	Ready for single step
	OUT6	Coolant ON
	OUT7	Forward limit ON
Output #2	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

Variable Spindle speed variable type

Long stroke

Large dia. drilling



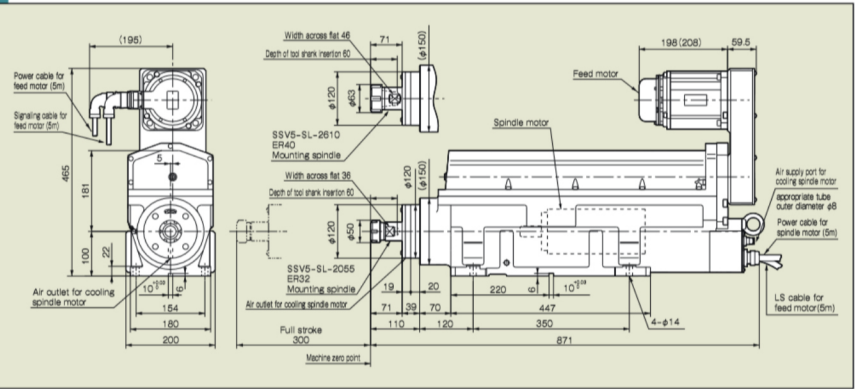
High-power model which has 1.6kW spindle motor and 7,760N thrust.
It is capable of end-mill, facing or 18mm diameter drilling operations into steel material utilizing a unique linear guide system (JP PAT.).

Specification Chart

Specs.	Spindle speed (no load)		Chuck type (Collet chuck)	Chuck capacity mm	Max. drilling size			Stroke mm	Spindle motor kW	Feed motor kW	Thrust N	Rapid approach speed mm/sec	Cutting speed mm/sec	Weight kg
	50Hz	60Hz			AL* (ADC)	FC* (FC200)	ST* (S45C)							
Model	min ⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	kg
SSV5-SL-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-SL-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 spindle inverter is a 3-phase 200V AC±10%, 50/60Hz.
4. In 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 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 in order 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-SL-2055	1	KH-32A
SSV5-SL-2610		

Dimensions(mm)

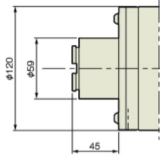
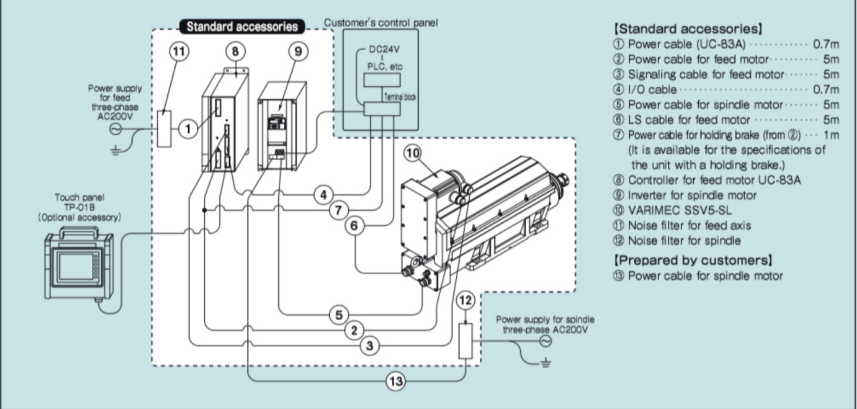


Fig. 1 KH-32A

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

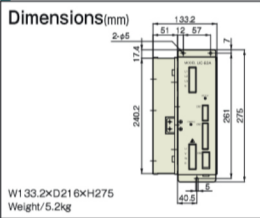
Electrical System Diagram

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

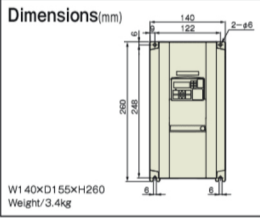


- Notes 1. The feed controller and the spindle inverter are standard accessories.
2. In order to perform data input and to display various monitors and alarms, the optional touch panel TP-01B type is required. The attached cable is 3m long. Please refer to page 26 for details.

Controller for Feed Motor UC-83A



Inverter for Spindle Motor



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
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

Max. Drilling Size (mm)

Aluminum
φ16

Steel
φ11

SELFEEDER MECHATRIC

SSM4

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



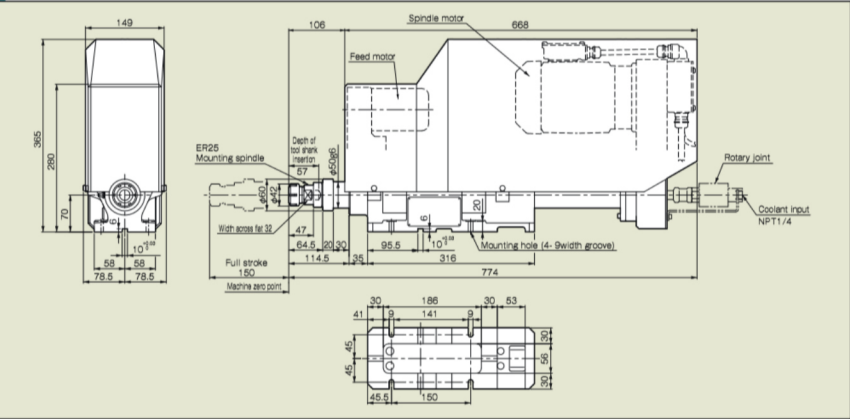
Most suitable unit for small diameter and deep hole drilling. The spindle rotation speed is easily adjusted in the program. It can utilize coolant center-through tooling specification as an option for doing more high-efficient processing.

Specification Chart

Specs.	Spindle speed (no load)		Chuck type (Collet chuck)	Chuck capacity	Max. drilling size			Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	50Hz	60Hz			AL* (ADC)	FC* (FC200)	ST* (S45C)							
Model	min ⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	mm/sec	kg
SSM4-SL-1673	1,470~	7,320	ER25	0.5~16	6	5	4	Max. 150	0.75 DC brushless motor Rated speed 3,600min ⁻¹	0.4 AC servo motor	2,320	Max. 150	Max. 16.7	60
SSM4-SL-1636	720~	3,600			8	7	6		0.75 DC brushless motor Rated speed 1,800min ⁻¹					
SSM4-SL-1618	360~	1,800			11	9	8							
SSM4-SL-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 spindle inverter is a 3-phase 200V AC±10%, 50/60Hz. (Feeding axis controller is single-phase.)
4. In 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...Aluminum, 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-SL-1673, SSM4-SL-1636	1	KH-16A
SSM4-SL-1618, SSM4-SL-1608	2	KH-22A

Dimensions(mm)

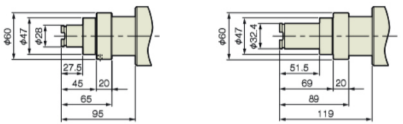


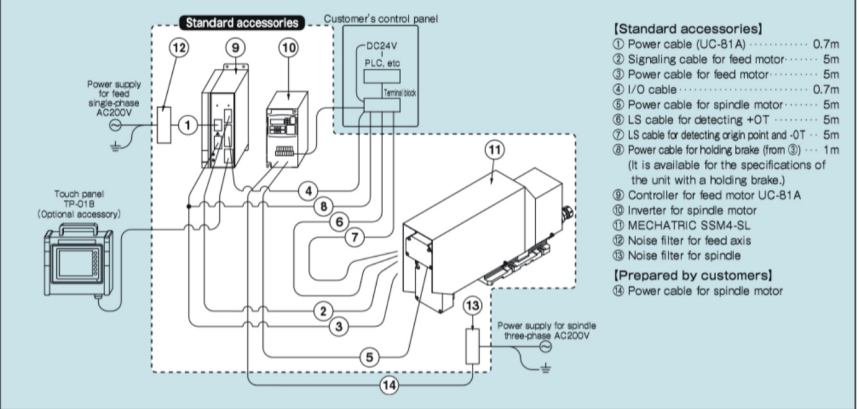
Fig. 1 KH-16A

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.

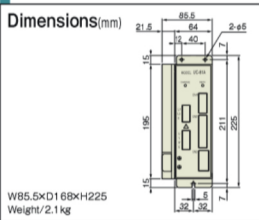
Electrical System Diagram

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

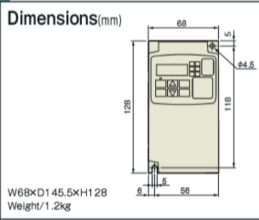


- Notes 1. The feed controller and the spindle inverter are standard accessories.
2. In order to perform data input and to display various monitors and alarms, the optional touch panel TP-Q18 type is required. The attached cable is 3m long. Please refer to page 26 for details.

Controller for Feed Motor UC-81A



Inverter for Spindle Motor



Specification of Signal

I/O	Signal	Contents
Analog output	ORD	Command for spindle speed
	COM	Ground of command for spindle speed
	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-
Input #1	IN8	Forward side OT
	IN9	Backward side OT
	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
Output #2	OUT0	RDY
	OUT1	Under auto operation
	OUT2	Program end
	OUT3	Origin
Output #2	OUT4	Spindle ON
	OUT5	Ready for single step
	OUT6	Coolant ON
	OUT7	Forward limit ON
Output #2	OUT8	Alarm

- #1 Voltage: DC24V, Electric current: 10mA
#2 Voltage: DC24V, Electric current: 90mA

SELFEEDE MECHATRIC

SSM5

- Long stroke
- Small dia. and deep hole drilling
- Large dia. drilling
- Coolant center-through
- Linear guide



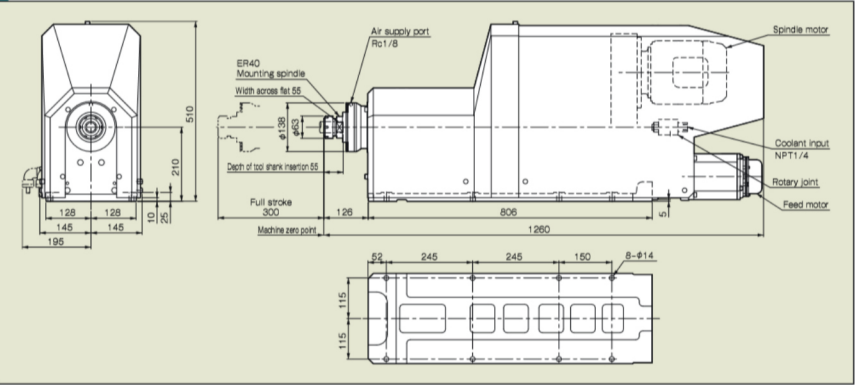
High-precision and high-rigidity unit which uses united structure of spindle unit and slide table.
It offers high-efficient deep hole drilling because of 300mm long stroke and coolant center-through system.

Specification Chart

Specs.	Spindle speed (no load)		Chuck type (Collet chuck)	Chuck capacity	Max. drilling size			Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed	Weight
	50Hz	60Hz			AL* (ADC)	FC* (FC200)	ST* (S45C)							
Model	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							
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							
SSM5-2602BCL	220	260			24	21	19							

Notes 1. To select your model, refer to the workplace 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 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 is standard part for SSM5.

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 SELFEEDE	Fig. No.	Spindle nose model No.
SSM5-26*~BCL	1	KH-32EC

Dimensions(mm)

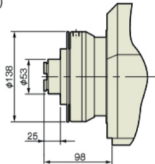
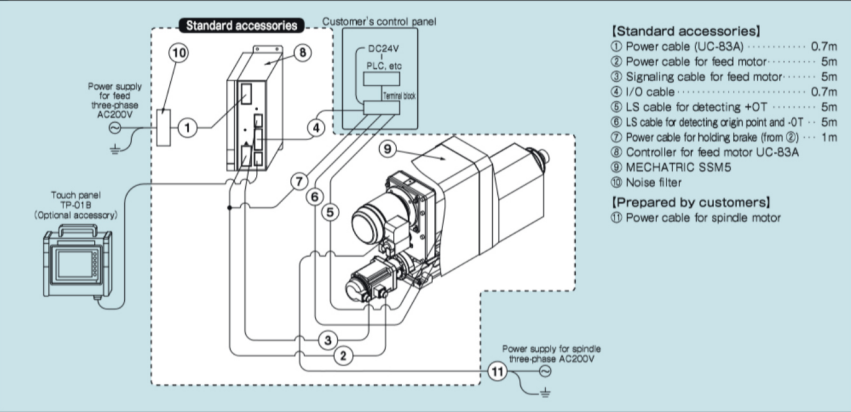


Fig. 1 KH-32EC

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

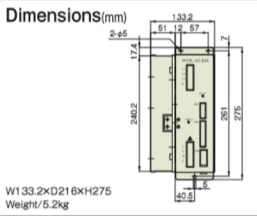
Electrical System Diagram

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. In order to perform data input and to display various monitors and alarms, the optional touch panel TP-018 type is required. The attached cable is 3m long. Please refer to page 26 for details.

Controller for Feed Motor UC-83A



Specification of Signal

I/O	Signal	Contents	I/O	Signal	Contents
Input #1	IN0	Emergency stop	Output #2	OUT0	RDY
	IN1	Manual coolant ON/OFF		OUT1	Under auto operation
	IN2	Start up		OUT2	Program end
	IN3	Machine zero return		OUT3	Origin
	IN4	Single step		OUT4	Spindle ON
	IN5	Spindle alarm		OUT5	Ready for single step
	IN6	JOG+		OUT6	Coolant ON
	IN7	JOG-		OUT7	Forward limit ON
	IN8	Forward side OT		OUT8	Alarm
	IN9	Backward side OT (Combine with origin LS)	#1 Voltage: DC24V, Electric current: 10mA		
	NC	No contact terminal	#2 Voltage: DC24V, Electric current: 90mA		
	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			

Max. Drilling Size (mm)
Aluminum
φ16
Steel
φ11

SELFEEDER MECHATRIC

MSC

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

Slim & long stroke model with 134 mm wide and 150 mm stroke. It is compatible with a variety of options, including swivel and rear mounting of the spindle motor, and mounting of the multi-spindle head, and is excellent in versatility.

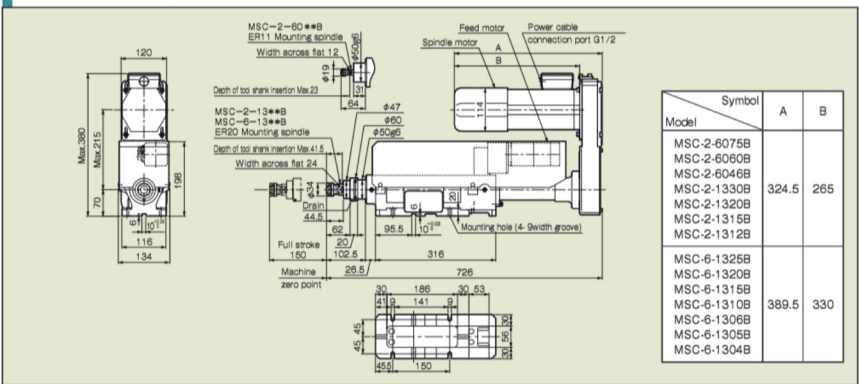


Specification Chart

Specs.	Spindle speed (no load)		Chuck type (Collet chuck)	Chucking capacity	Max. drilling size			Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Weight
	50Hz	60Hz			AL* (ADC)	FC* (FC200)	ST* (S45C)						
Model	min ⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	kg
MSC-2-6075B	7,500	9,000	ER11	0.5~7	3	1.5	1.5	150	0.35 2P Induction motor	0.4 AC servo motor	1,730	Max. 200	47
MSC-2-6060B	6,000	7,200			4	1.5	1.5						
MSC-2-6046B	4,800	5,500			6	4.5	4						
MSC-2-1330B	3,000	3,600			6.5	5.5	5						
MSC-2-1320B	2,000	2,400			8	6	5.5						
MSC-2-1315B	1,500	1,800	ER20	0.5~13	8.5	6.5	6		0.35 6P Induction motor				
MSC-2-1312B	1,200	1,400			9.5	7.5	6.5						
MSC-6-1325B	2,500	3,000			7	5.5	5						
MSC-6-1320B	2,000	2,400			8	6	5.5						
MSC-6-1315B	1,500	1,800			9.5	6.5	6						
MSC-6-1310B	1,000	1,200			10	8	7						
MSC-6-1306B	650	780			12.5	9	8						
MSC-6-1305B	500	600			14	12	10						
MSC-6-1304B	400	480			16	13	11						

- Notes 1. To select your model, refer to the workplace 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. Holding brake is attached to the feed motor.
4. AL*: Aluminium, FC*: Cast iron, ST*: Steel

Dimensions(mm)



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.
MSC-*****B	1	KH-14E, KH-16E
	2	KH-22E

Dimensions(mm)

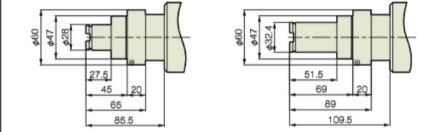
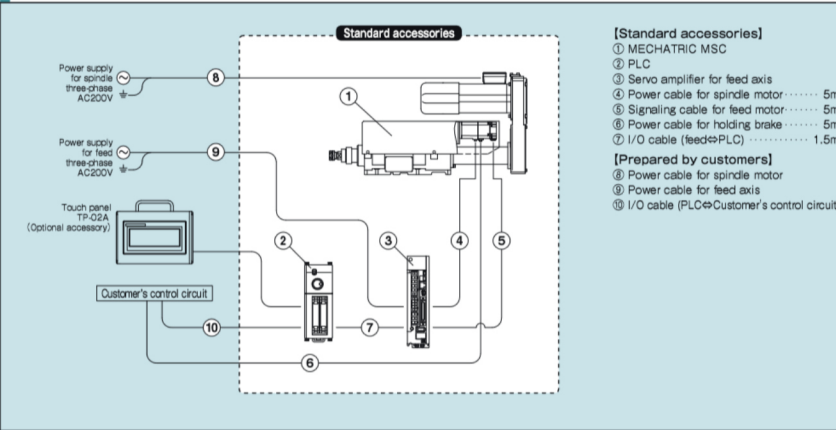


Fig. 1 KH-14E/KH-16E Fig. 2 KH-22E

- 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. If the spindle speed exceeds 5,000 min⁻¹, the quick change stub holder is not applied.

Electrical System Diagram

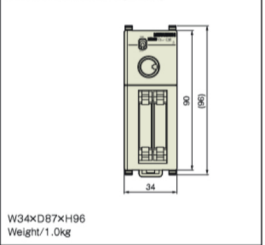
All the electric parts supplied as standard are indicated in [] box.
The purchaser is responsible for and needs to have the other cables and equipment.



- Notes 1. The PLC and servo amplifier for feed axis are standard accessories.
2. In order to perform data input and to display various monitors and alarms, the optional touch panel TP-02A type is required. The attached cable is 3m long. Please refer to page 26 for details.

PLC

Dimensions(mm)

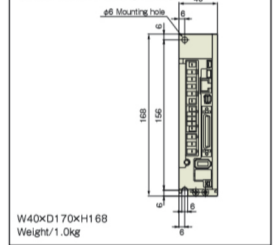


W34xD87xH96
Weight/1.0kg

Note: When installing, customers need to prepare the 35 mm wide DIN rail.

Servo Amplifier for Feed Axis

Dimensions(mm)



W40xD170xH168
Weight/1.0kg

Specification of Signal

I/O	Signal	Contents
Input #1	X06	Emergency stop
	X07	Spindle motor overload
	X10	Auto start
	X11	Machine zero return
	X12	Alarm reset
	X13	EXT/MANUAL
	X14	Program selection 1
	X15	Program selection 2
Output #2	X16	Program selection 4
	X17	Program selection 8
	Y12	Under auto operation
	Y13	Program end
	Y14	Machine origin
	Y15	Spindle ON
	Y16	Alarm
	Y17	Emergency stop condition

#1 Voltage: DC24V, Electric current: 5mA
#2 Voltage: DC24V, Electric current: 100mA

Max. Drilling Size (mm)
Aluminum
φ14
Steel
φ10

SELFEEDER MECHATRIC

MS3P

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



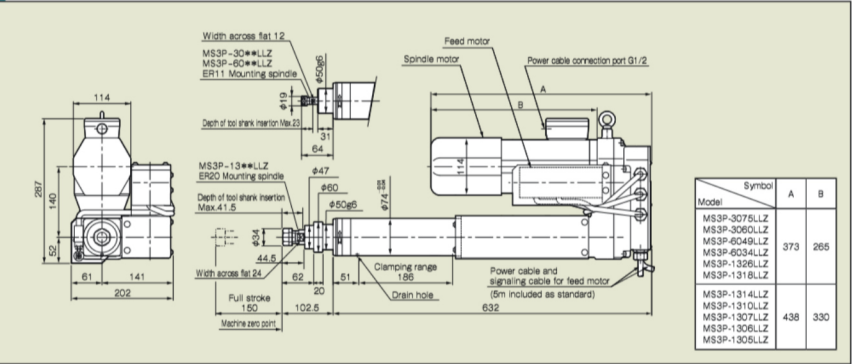
Most suitable unit for small diameter/deep hole drilling or high-precision drilling with carbide tooling.
Easy unit replacement on operations originally utilizing SELFEEDER "ELECTRIC" types because it uses the same "circular body style".

Specification Chart

Specs.	Spindle speed (no load)		Chuck type (Collet chuck)	Chuck capacity mm	Max. drilling size			Stroke mm	Spindle motor kW	Feed motor kW	Thrust N	Rapid approach speed mm/sec	Cutting speed mm/sec	Weight kg
	50Hz	60Hz			AL* (ADC)	FC* (FC200)	ST* (S45C)							
Model	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			7.5	3.5	3.5							
MS3P-1318LLZ	1,800	2,200	ER20	0.5~13	8.5	5	4	150	0.35 6P Induction motor	0.4 AC servo motor	1,760	Max. 200	Max. 16.7	35
MS3P-1314LLZ	1,400	1,700			9.5	6	6							
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 workplace 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 spindle motor is a 3-phase 200V AC±10%, 50/60Hz. (Feeding axis controller is single-phase.)
4. In case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. AL*—Aluminum, FC*—Cast Iron, ST*—Steel

Dimensions(mm)



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

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.

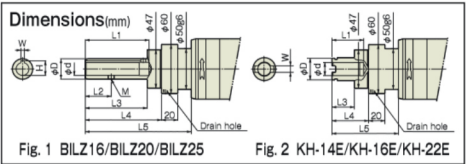
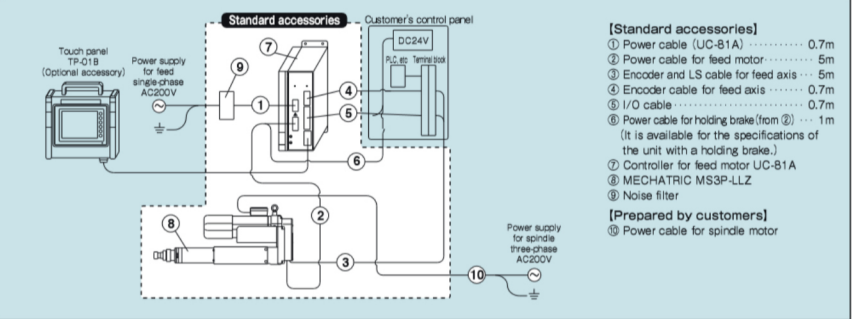


Fig. No.	Spindle nose model No.	d	D	H ^{+0.1} ₀	W	L1	M	L2	L3	L4	L5
1	BILZ16	16H6 ^{+0.011} ₀	25g6 ^{-0.007} _{-0.020}	17.3	5 ^{+0.145} _{+0.070}	74	M6×1	34	74	91.5	132
	BILZ20	20H6 ^{+0.013} ₀	32g6 ^{-0.009} _{-0.025}	21.3		77					
	BILZ25	25H6 ^{+0.013} ₀	37g6 ^{-0.009} _{-0.025}	26.7		85					
2	KH-14E	14 ^{+0.010} _{+0.005}	22.0 ⁰ _{-0.1}	—	8C10 ^{+0.138} _{+0.080}	38	—	—	27.5	45	85.5
	KH-16E	16 ^{+0.010} _{+0.005}	26.4 ⁰ _{-0.1}			43					
	KH-22E	22 ^{+0.010} _{+0.005}	32.4 ⁰ _{-0.1}			58					

- 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. If the spindle speed exceeds 5,000 min⁻¹, the quick change stub holder is not applied.

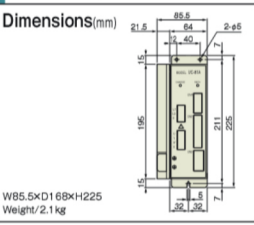
Electrical System Diagram

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. In order to perform data input and to display various monitors and alarms, the optional touch panel TP-01B type is required. The attached cable is 3m long. Please refer to page 26 for details.

Controller for Feed Motor UC-81A



Specification of Signal

I/O	Signal	Contents	I/O	Signal	Contents
Input #1	1	Emergency stop	Output #2	101	RDY
	2	Manual coolant ON/OFF		102	Under auto operation
	3	Start up		103	Program end
	4	Machine zero return		104	Origin
	5	Single stop		105	Spindle ON
	6	Spindle alarm		503	Ready for single step
	7	JOG+		107	Coolant ON
	8	JOG-		108	Forward limit ON
	10	Forward side OT (Stop signal when past upper limit)		109	Alarm
	11	Backward side OT (Combine with origin LS)			
Input #1	NC	No contact terminal	Output #2		
	12	Alarm clear			
	13	EXT/MANUAL			
	14	Manual spindle ON/OFF			
	15	Program 1			
	16	Program 2			
	17	Program 4			
	18	Program 8			
	19	Program 10			
	20	Program 20			
Input #1	401	Program 40	Output #2		
	402	Program 80			

- #1 Voltage: DC24V, Electric current: 10mA
#2 Voltage: DC24V, Electric current: 90mA

MS7

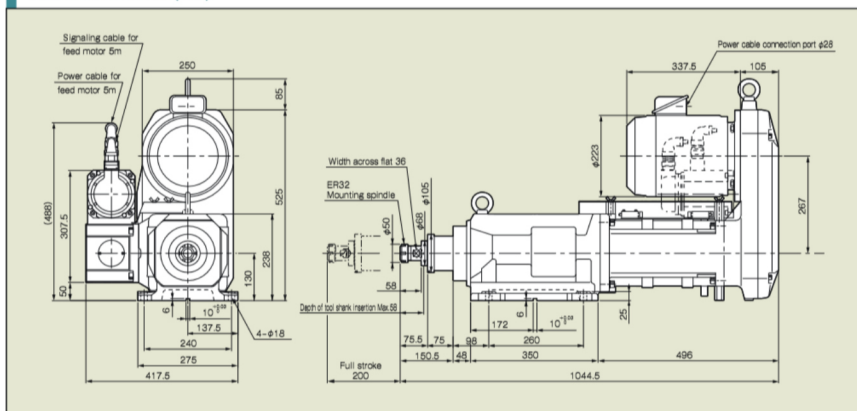


Specification Chart

[illegible]

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 spindle motor is a 3-phase 200V AC±10%, 50/60Hz.
4. In case of a servo motor with a holding brake (optional), add "B" to the end of the model number.
5. AL...Aluminum, FC...Cast Iron, ST...Steel

Dimensions_(mm)



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

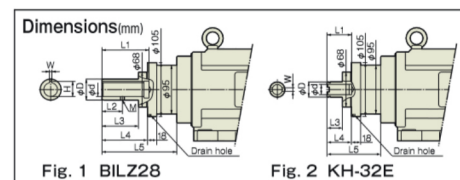


Fig. 1 BILZ28

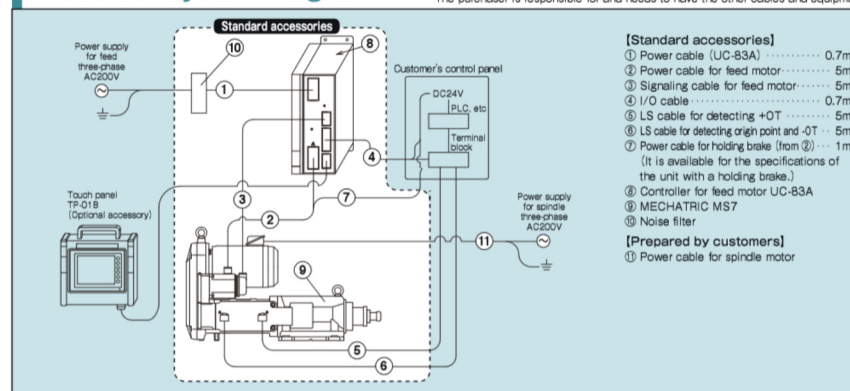
Fig. 2 KH-32E

Fig. No.	Spindle nose model No.	d	D	H ^{+0.1} ₀	W	L1	M	L2	L3	L4	L5
1	BIL2Z8	28H6 ^{+0.013} ₀	40G6 ^{-0.009} _{-0.025}	29.7	6 ^{+0.145} _{+0.070}	99	M8×1.25	38	83	100.5	175.5
2	KH-32E	32 ^{+0.010} ₀	43.8 ₀	—	10C10 ^{+0.138} ₀	83	—	—	30	47.5	122.5

Note: 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.

Electrical System Diagram

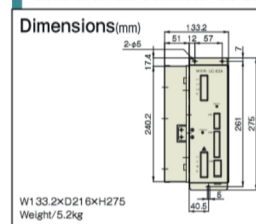
All the electric parts supplied as standard are indicated in [] box.
The purchaser is responsible for and needs to have the other cables and equipment.



Notes 1. The feed controller is standard accessories.

2. In order to perform data input and to display various monitors and alarms, the optional touch panel TP-01B type is required. The attached cable is 3m long. Please refer to page 26 for details.

Controller for Feed Motor UC-83A



■ Specification of Signal

I/O	Signal	Contents	I/O	Signal	Contents
Input #1	IN0	Emergency stop	Output #2	OUT0	RDY
	IN1	Manual coolant ON/OFF		OUT1	Under auto operation
	IN2	Start up		OUT2	Program end
	IN3	Machine zero return		OUT3	Origin
	IN4	Single step		OUT4	Spindle ON
	IN5	Spindle alarm		OUT5	Ready for single step
	IN6	JOG+		OUT6	Coolant ON
	IN7	JOG-		OUT7	Forward limit ON
	IN8	Forward side OT	OUT8	Alarm	
	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				

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

※1 Voltage: DC24V, Electric current: 10mA

※2 Voltage: DC24V, Electric current: 90mA

Max. Drilling Size (mm)

Aluminum
φ26

Steel
φ20

Max. Tapping Size (mm)

Aluminum
M27

Steel
M18

Dimensions(mm)

SELFEEDER DUAL

MS6-DS

- Multi-spindle heads attachable
- Spindle speed variable type
- Large dia. drilling
- 4-spindle turret
- Rigid tapping



Automatic drilling machine utilizing MS6-DS

A model that makes drilling and tapping easy and accurate with a single unit.
High-power servo motors are used for feed and rotation, respectively, to achieve perfect synchronization of feed and rotation.
It is possible to flexibly cope with design changes such as different types of tapping.

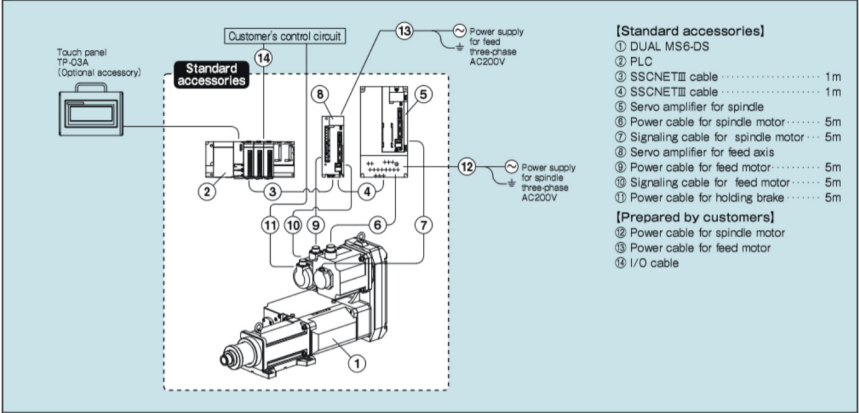
Specification Chart

Specs.	Spindle speed (no load)		Chuck type	Chucking capacity	Max. drilling/tapping size			Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Weight
	50Hz	60Hz			AL* (ADC)	FC* (FC200)	ST* (S45C)						
Model	min ⁻¹		—	mm	mm	mm	mm	mm	kW	kW	N	mm/sec	kg
MS6-DS-2416	Max.1,680		Stub holder [KH-32E] [NT tool]	3.6~22.0	21	19	16	Max. 150	5.0 AC servo motor	1.0 AC servo motor	Max. 4,630	Max. 183	120
MS6-DS-2409	Max.940				M22	M14	M14						
					26	23	20						
					M27	M18	M18						

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 column indicates the maximum drilling capacity, and the lower row indicates the maximum tapping capacity.
3. The drilling capacity shown above is for a depth equivalent to the drill diameter times two.
The tapping capacity is a value using a spiral tap or a point tap, and the screwing depth is 1.5 times the diameter of the tap.
4. Holding brake is attached to the feed motor.
5. AL*---Aluminium, FC*---Cast iron, ST*---Steel

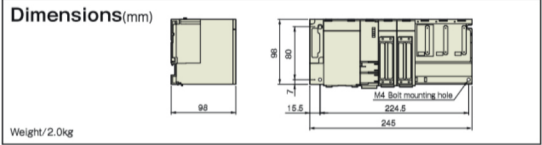
Electrical System Diagram

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.



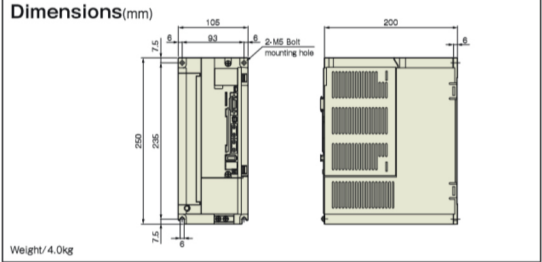
Notes 1. The PLC and servo amplifier for spindle and feed axis are standard accessories.
2. In order to perform data input and to display various monitors and alarms, the optional touch panel TP-03A type is required. The attached cable is 3m long. Please refer to page 26 for details.

PLC



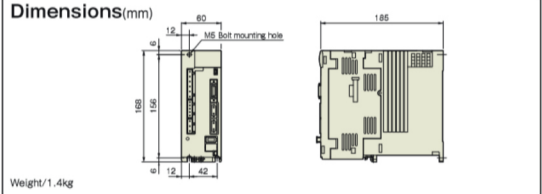
Weight/2.0kg

Servo Amplifier for Spindle



Weight/4.0kg

Servo Amplifier for Feed Axis



Weight/1.4kg

Specification of Signal

I/O	Signal	Contents
Input #1	X20	Emergency stop
	X21	Auto start
	X22	Machine zero return
	X23	Alarm reset
	X24	EXT/MANUAL
	X25	Program selection 1
	X26	Program selection 2
	X27	Program selection 4
	X28	Program selection 8
	X29	Program selection 10
	X2A	Program selection 20
	X2B	Program selection 40
	X2C	Program selection 80
	X2D	Spare
Output #2	X2E	Spare
	X2F	Spare
	Y30	Under auto operation
	Y31	Program end
	Y32	Machine zero point
	Y33	Second origin
	Y34	Spindle rotating
	Y35	Alarm
	Y36	Emergency stop
	Y37	Spare
	Y38	Spare
	Y39	Spare
	Y3A	Spare
	Y3B	Spare
Power	Y3C	Spare
	Y3D	Spare
	Y3E	Spare
	Y3F	Spare
	+24V	External I/O power DC24V
	0V	External I/O power 0V

#1 Voltage: DC24V, Electric current: 4mA or less
#2 Voltage: DC24V, Electric current: 100 mA or less /point

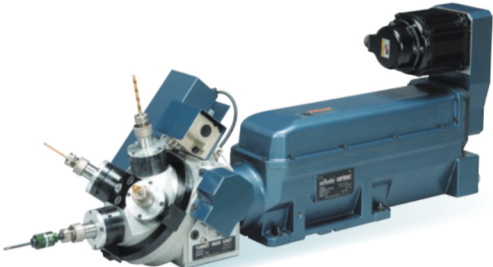
Max. Drilling Size (mm)
Aluminum
φ12
Steel
φ8

Max. Tapping Size (mm)
Aluminum
M10
Steel
M6

CNC TURRET HEAD

4TH3S

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



Compact turret unit performing 4 different operations driven by "SELFEE VARIMEC" and "DUAL". Deliver high-performance even on automatic drilling machine with tool change system.

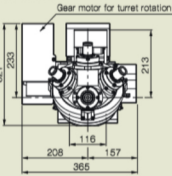
Specification Chart

Specs.	Spindle speed (no load)		Chuck type	Chucking capacity	Max. drilling/tapping size			Stroke	Spindle motor	Feed motor	Thrust	Rapid approach speed	Cutting speed		Indexing time		Weight
	50Hz	60Hz			AL* (ADC)	FC* (FC200)	ST* (S45C)						50Hz	60Hz	sec	sec	
Model	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		Max. 250	1.0 DC brushless motor	1.2 AC servo motor						4,600
4TH3S + SSV4-2070THB	1,000~7,000				9	8	7	Max. 250	2.0 AC servo motor	1.0 AC servo motor	Max. 183	150					
4TH3S + MS6-DS-2416TH	Max.1,680				M3~M12	M10	M6	M6	Max. 150								

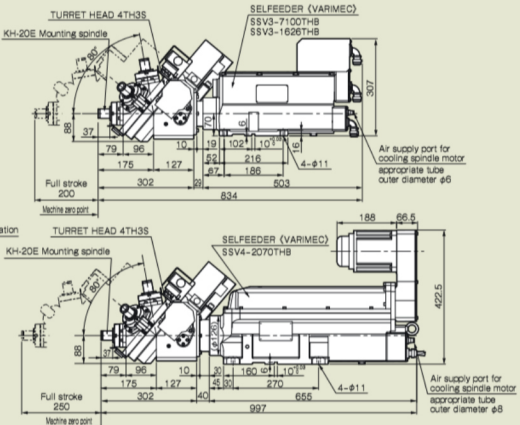
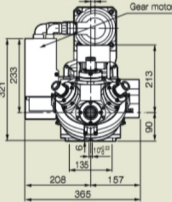
Notes 1. To select your model, refer to the workpiece configurations, material, cutting properties, diameter of the hole, and rotation speed (cutting speed).
2. The SSV3 and SSV4 capability columns indicate the drilling capability. The upper row of the capability column of MS6-DS indicates the drilling capability, and the lower row indicates the tapping capability.
3. The drilling capacity shown above is for a depth equivalent to the drill diameter times two. The tapping capacity is a value using a spiral tap or a point tap, and the screwing depth is 1.5 times the diameter of the tap.
4. Indexing time is the time for turret rotation. It does not include the time of spindle start and stop.
5. When you install this TURRET HEAD into SSV3-7100THB, please set "under 7,000min⁻¹" for spindle rotation speed.
6. Holding brake is attached to the feed motor.
7. AL*~Aluminum, FC*~Cast iron, ST*~Steel

Dimensions(mm)

SSV3 install model



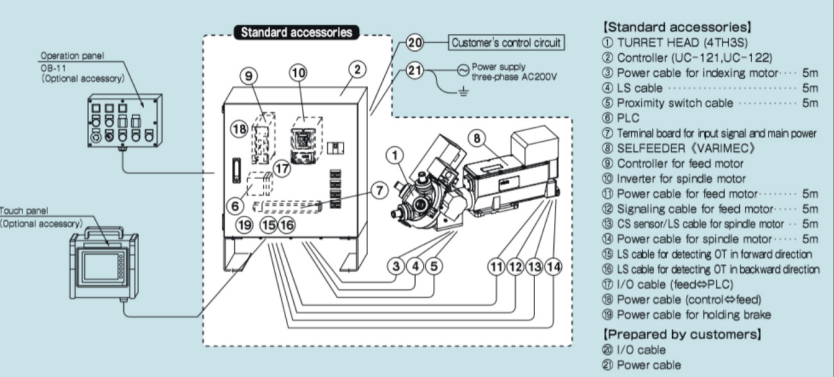
SSV4 install model



Notes 1. Air must be supplied to cool the spindle motor in order to protect the spindle bearings. Be sure to supply clean dry air.
2. Contact your nearest sales office for the MS6-DS type mounting specifications.

Electrical System Diagram

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

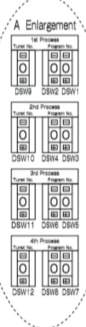
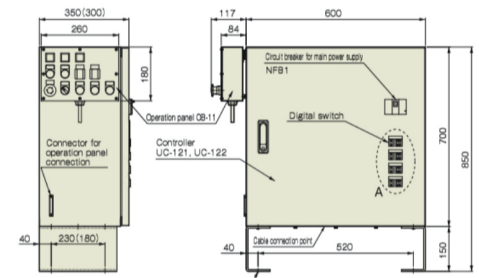


Notes 1. In order to perform data input and to display various monitors and alarms, an optional operation panel and touch panel are required. The attached cable is 3m long. Please contact your nearest sales office for more information.
2. Turret rotation can operate from operation panel only. Turret rotation cannot be performed by touch panel.
3. Contact your nearest sales office for the MS6-DS type mounting specifications.

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.
3. Contact your nearest sales office for the MS6-DS type mounting specifications.

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	SELFEE 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: 7mA or less
#2 Voltage: DC24V. Electric current: 100mA or less
Note: Contact your nearest sales office for the MS6-DS type mounting specifications.

Application



Data Input System (Optional Accessory)

Touch panel, optional, is necessary for inputting data such as stroke and rotation speed, individual manual operation, and alarm display. A touch panel can be selected based upon SELFEEDER model.

Touch Panel TF-CB

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

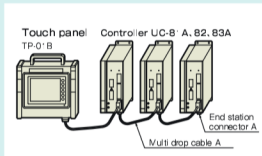
Applicable Models SSV2, SSV3, SSV4, SSV5, SSM4, SSM5, MS3P, MS7
* Either of the feed axis controllers UC-B* A, B2 or B3A is attached.



TF-CB

Multi Drop Connection

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



Main Specifications

Monitor size	5.7inch
Display language	4 languages (Japanese, English, Chinese, Korean)
Included cable	3m
Back up memory (Option)	Compact flash card (32MB) Compact flash reader/writer

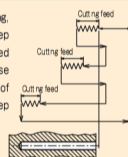
Process Patterns

4 process patterns are included in the UC-B* Controller. Simply choose a suitable pattern for your processing specification.

Example of Process Patterns

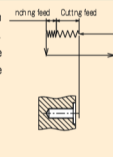
No.03 Deep Hole Drilling (Step Feed Drilling)

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.



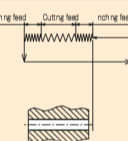
No.05 Drilling Counterboring

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



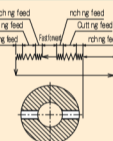
No.06 Drilling (with Inching Feed)

Applied to reduce burrs 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.



Touch Panel TF-C2A / TF-C3A

A 4.5-inch compact touch panel. The machining pattern can be selected to be equivalent to that of the UC-B* type controller. (Only MS6-DS tapping pattern) You can back up parameters and programs by inserting an SD card into SD card slot.



TF-C2A / TF-C3A

Main Specifications

Monitor size	4.5inch
Display language	English only
Included cable	3m

Note: Please contact your nearest sales office for information on entering data for the CNC TURRET HEAD (4TH3S).

Other Attachable Products

Additional Sugino products which can achieve high-efficient operations besides SELFEEDER SERVO series.

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 deburring operation.
3. Install into special purpose machine for various cutting operations.



Specification Chart

Specs.	Spindle speed (no load)		Chuck type (Collet chuck)	Chuck capacity	Max. drilling size			Spindle motor	Weight
	50Hz	60Hz			AL* (ADC)	FC* (FC200)	ST* (S45C)		
Model	min ⁻¹			mm	mm	mm	mm	kW	kg
SSV2-7200CM	2,000~20,000		ER11WS	0.5~7.0	5	4	3.5	0.9	4
SSV2-039CM	390~3,900		ER6	0.5~0.0	8.5	7.5	6.5		
SSV3-700CM	1,000~0,000		ER11	0.5~7.0	6.5	5	4	0.4	2
SSV3-626CM	265~2,650		ER20	0.5~3.0		9	8		
			ER25	0.5~6.0					
SSV4-2070CM	1,000~7,000		ER32	1.0~20.0	9	8	7	1.0	24
SSV4-207CM	250~750				6	5	3		

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, 50/60Hz.
4. For cooling the motor inside, please input clean dry air into air-inlet.
5. Take care not to close the air-outlet for motor cooling by clamp fixture etc. Also 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*: Aluminum, FC*: Cast iron, ST*: Steel

Dimensions (mm)

Fig.1 SSV2CM)

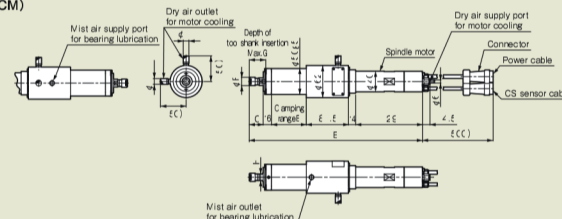
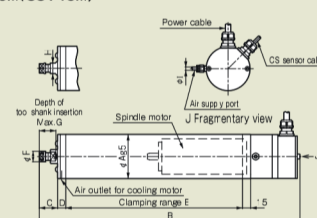


Fig.2 SSV3CM, SSV4CM)



Symbol	Fig. No.	A	B	C	D	E	F	G	H
Model									
SSV2-7200CM	-	335	27	-	675	6	3	3	-
SSV2-039CM	-	392	4	-	05	28	35	9	-
SSV3-700CM	-	473	33	-	-	9	30	9	-
SSV3-626CM	2	80	482	42	-	320	34	60	27
							42	32	
SSV4-2070CM	-	486	46	-	-	454	50	58	36
SSV4-207CM	-	00	869	58	-	-	-	-	-

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