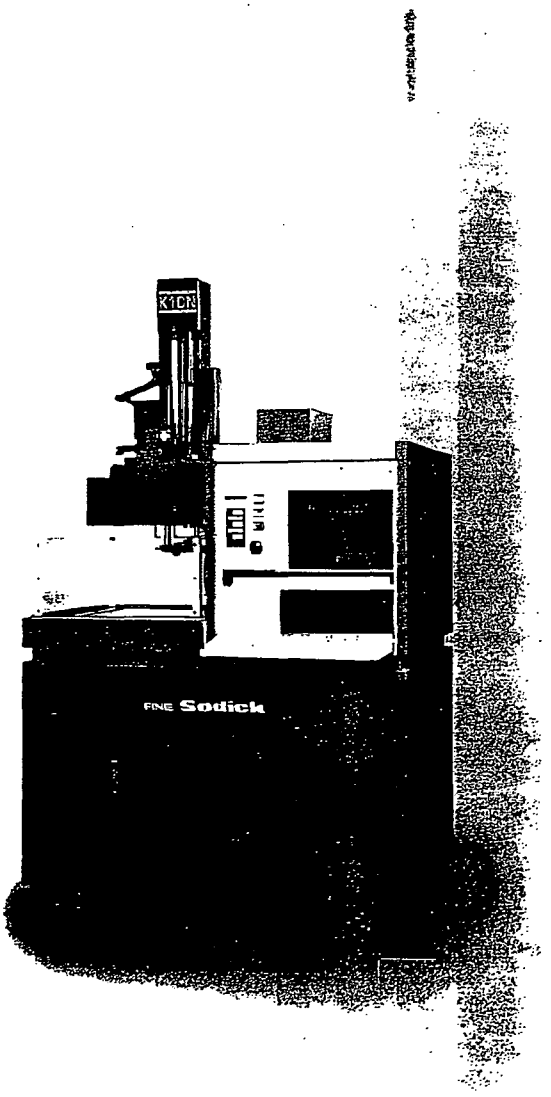
FINE Sodick

High speed small hole drilling EDM

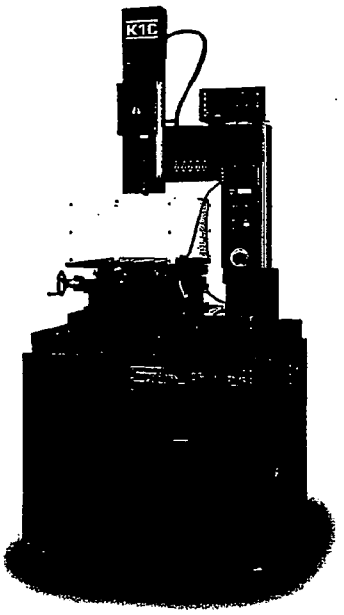
K series



K1C/K1CN

K series
High speed small hole drilling EDM

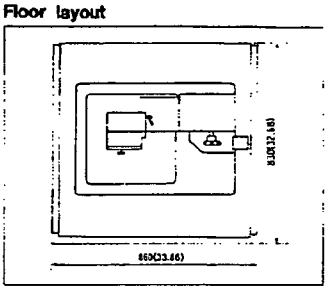
Sodick's "K series" machines are designed to drill small holes in hard materials or awkward places, faster than conventional methods, by using Electrical Discharge Machining (EDM).



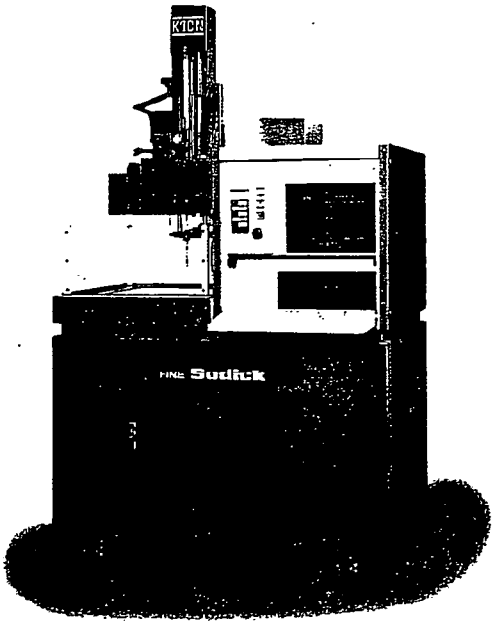
K1C Manual type high speed EDM "K1C"

The model K1C is a manual high speed drilling machine, perfect for making start holes or coolant holes in hardend materials. An X & Y axis table with digital scale unit is provided as standard.

Floor layout



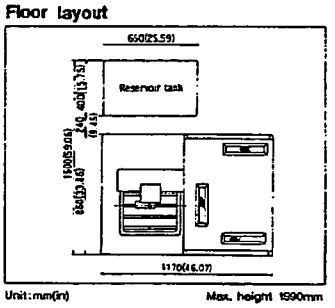
Unit:mm(in) Max. height 1990mm



K1CN CNC high speed EDM "K1CN"

The model K1CN is a high speed drilling machine equipped with a CNC control and an automatic electrode feeding system.
It's capabilities include unattended operation for production runs or multiple hole patterns.

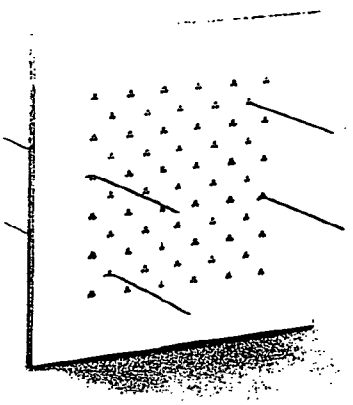
Floor layout



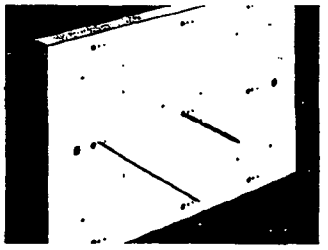
Unit:mm(in) Max. height 1990mm

Various applications for small holes

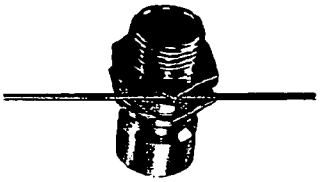
Small holes can be drilled in hardened steel, tungsten carbide and other type of electrically conductive materials by using tubular electrodes in a range from 0.3mm(0.012") to 3.0mm(0.118") diameter.



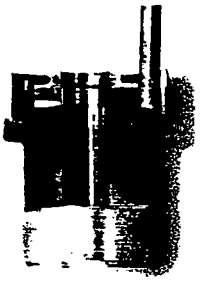
Coolant nozzle holes cut in stainless steel.
Machining time:11 (sec/hole)



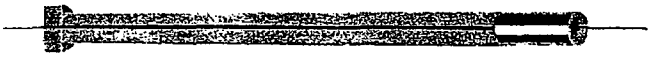
Start holes for wire-cut machining.



Holes simply cut in awkward places.
Machining time:39 (sec)



Blind hole for production parts.



Long hole cut in ejector
Pin dia. 1.12mm × ℓ 150mm (0.044×5.91 in)
Machining time:9 (min)

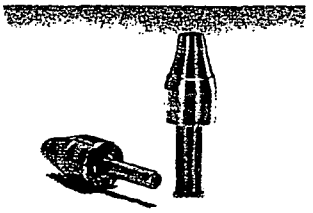
■Accessories

	K1C	K1CN
Electrode guide	○*1	○*2
AEF (Auto. Electrode Feeder)	—	○
Tubular electrode	○	○
Special machining fluid (Vitol-KN)	○	○
Flush nozzle	△	○
Tool kit	○	○
Digital scale unit	○	—
Splash guard	○	○
Paper filter	○	○
Reservoir tank	△	○

○ : Standard △ : Optinal
*1 Diameter 0.8 mm
*2 Diameter 0.5, 0.8, 1.0, 1.5 mm
(comes standard with the machine.)
Electrode guides are available in a range from ϕ0.3mm to 3.0mm in 0.1mm increments.

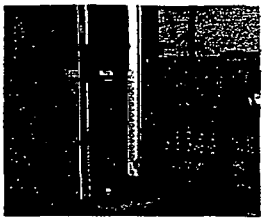
■Optional accessories

● Extended electrode guide



The extended electrode guides are used to drill a recessed or inclined workpiece.

● Auxiliary electrode guide

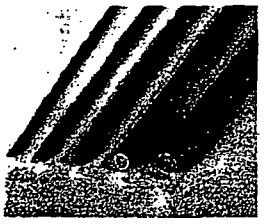


This guide attachment is designed to minimized run-out of electrode when less than 0.5mm diameter electrode is used.

● Reservoir tank

Provides a larger reservoir tank for clean fluid.

● Tubular electrode



Tubular electrodes are available with the diameter ranging from 0.3 mm to 3.0mm with 0.1mm step.

K series K1C/K1CN

■Specifications

●Machine tool

		K1C	K1CN
Worktable size (L×W)	mm (in)	250×350 (9.8×13.8)	380×380 (15.0×15.0)
X axis travel	mm (in)	200 (7.9)	200 (7.9)
Y axis travel	mm (in)	300 (11.8)	300 (11.8)
Z axis travel	mm (in)	300 (11.8)	300 (11.8)
Manual travels (W axis)	mm (in)	230 (9.1)	—
Maximum weight of workpiece	kg	100	200
Maximum diameter of electrode	mm (in)	φ0.3 to φ3.0 (φ0.012 to φ0.118)	φ0.3 to φ3.0 (φ0.012 to φ0.118)
Distance from electrode guide to worktable surface	mm (in)	10 to 240 (0.4×9.4)	160 to 240 (6.3×9.4)
Outer dimensions (W×L×H)	mm (in)	860×860×1990 (33.9×33.9×78.3)	1170×860×1990 (46.1×33.9×78.3)
Installation size	mm (in)	860×860 (33.9×33.9)	1170×1500 (46.1×59.1)
Machine tool weight	kg	500	650
Power consumption	kVA	3.3	3.5
Positioning accuracy	mm (in)	0.03 (0.001)	0.02 (0.0008)

●Reservoir tank

Capacity (Built-in type)	ℓ (gal)	20 (4.44)	—
Capacity (Additional)	ℓ (gal)	(100※1) (22.22)	100 (22.22)
Fluid filtration method		Replaceable sponge filter	
Outer dimensions (W×L×H)	mm (in)	(Built-in type)	650×400×635 (25.6×15.8×25.0)

※1 Capacity including additional tank (Option)

●AEF (Automatic Electrode Feeder)

Number of cartridge		1 (Identical dia.)
Power source	—	Pneumatic

★Specifications are subject to change without notice.

●CNC Power unit for K1CN

Power requirement	200/220 V 50/60 Hz
Pulse generator	Transistor
Maximum current	30A
Input method	3.5-inch micro floppy disk M.D.I. Paper tape
Display type	14-inch color graphic display(CRT)
Characters used	Alphabetic, Numeric
Display capability	640×200 dots
Keyboard	JIS standard arrangement
Least input command	±0.001mm (±0.0001in)
Maximum input command	±999.999mm (±99.9999in)
User memory capacity	Maximum 640K bytes per floppy disk
Axis controlled under CNC	Maximum three axes (X,Y,Z)
Battery back up	200 hours
Jog feed rate	Three Speed settings

●Functions

Memory operation
Inch-metric conversion
Dry run
Program editing (insertion, deletion)
HALT-RST
M code output
Auto positioning
Program sequence number call-up
Repeat of programmed hole patterns
Conversational automatic programming
Multiple program connection
Display of machining positions
Automatic selection of machining conditions
Direct G code command input
Simultaneous operation of programming and machining
Incremental/Absolute command system

●Option equipment

Tape reader.

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