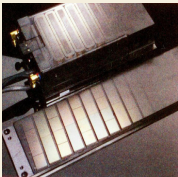
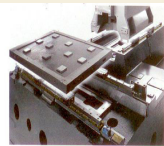


Sodick TOP 10 ADVANTAGES

The masters in linear EDM technology

1 Linear Motor Drives

Sodick first introduced their linear motor EDM in 1998. Over 24,000 units have been sold world wide. Since linear motors eliminate the need for ball screws, you will never worry about replacing them or creating scrapped part due to excessive backlash.



Linear motors will never wear out unlike a set of ball screws, which can cost over Rs:4 Lakhs. This direct drive system also eliminates the need for couplings or belts between the motor and the axis, which results in quicker response time to the spark gap and therefore faster and more reliable machining.

- Since there is no contact between the table and the linear motor drive, the axis movement is vibration free and quiet.
- Linear motor is composed of magnets and coils, the same components of rotary servo motors but without the mechanical linkage of a ball screw and nut.
- Linear motors require no maintenance and their life expectancy is indefinite. Sodick manufactures their own linear motors to ensure reliability and affordability.
- The high axis speed and acceleration of a linear motor driven sinker EDM automatically creates its own flushing condition. This eliminates the need & experience to machine flush holes into the electrodes or to set up auxiliary flush lines.

2 Glass Scale Feedback

- Linear glass scales are mounted to all moving axes* This ensures cutting accuracy and repeatability. Since the scales are mounted directly to the axis, it's always measuring the true machine position. (Not the rotated position of the ball screw as is the case of rotary encoders).
- Some of our competitors also use glass scales but with ball screw drives. This is not a good solution, as the ball screw wears it creates a gap within the nut. Because of this gap, the glass scale and drive fight each other for the actual machine position, which results in vibration and inaccurate workpieces.



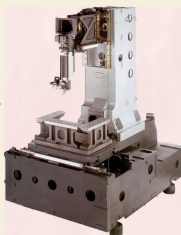
3 Sodick Motion Controller



- Sodick's Motion Controller (K-SMC) is integrated to machine's generator. The K-SMC controls all the axis motion, and monitors changes to the spark gap. Because of its quick reaction time it can make changes to the spark gap 500X per second resulting in instantaneous servo response. When linear motors are combined the K-SMC, it vastly reduces the possibility of wire breaks and increases the burn rate of your cut while maintaining the optimum discharge spark gap.

4 Solid Meehanite Castings

- Meehanite is the proven and preferred machine tool casting and is preferred to polymer concrete, which is a less expensive option. Our heavier, rigid, traditionally built machines are solid and stable to ensure good part accuracy.



5 Ceramic Components



- Strategic machine components such as the upper / lower arms, tables and work pedestal are composed of Sodick's very own manufactured ceramics. These ceramic components provide several advantages. They are 1.3 times more rigid than stainless steel and have the thermal expansion is 1/3 that of stainless steel. A more rigid and thermally stable machine will produce more accurate parts with consistent repeatability.

- Because of the ceramics chemical and physical stability, it will never oxidize. After years of operation, particles, and sludge tend

to adhere to insulated areas causing material corrosion. With Sodick's ceramic components this will never happen due to its strong resistance to such chemical erosion and therefore cutting speeds will remain consistent throughout the life of the machine.

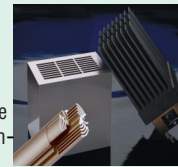
6 Windows Based Controls



- Learning a new unfamiliar control can be stressful to a machine operator. The Sodick Windows based control will create instant familiarity between the machine and operator. The operator will notice many similarities between their home or office computer. This ultimately puts the operator at ease, reduces the learning curve resulting in better productivity.

7 Power Supply

- The New Power Supply unit employs Perfect Active Control technology. It realizes the high speed processing of discharge control and motion control simultaneously by using serial communication technology 1Gbit/sec.
- In wire EDM, the Super Jet AWT-Annealing function ensures higher threading rate in submerged and enables to use round dice with less clearance to achieve high precision.
- Nano wear in Die-sinker EDM is World's first low electrode wear rate of less than 0.06 percent. Only one electrode can handle entire machining process from roughing to finishing. The cost of making multiple electrodes, set up time and errors in handling multiple electrodes can be significantly reduced.
- Arc-less + SVC circuits are employed for high speed machining and to attain mirror finish uniformly.



8 Onboard Programming



- Thanks to the Heart-NC automatic programming system, a fully integrated CAM package installed on the wire EDM machine controller as standard. Although some companies program their parts at a workstation are advantages to having this function on the control; generating wire path from imported CAD files, shop floor independence during out of normal hour operation, development of R&D parts, immediate response to last minute modification.

- Additionally, the Sodick CAM software makes it easier for beginners to start programming parts including importing DXF, IGES files and converting them to NC code right on the machine.
- LN assist professional, a completely menu driven automatic programming system in Die-sinker EDM offers wide variety of machining shapes patterns for all kinds of application.

9 Integrated accessories

- UPS for NC unit on the machine saves shut down and booting time during frequent power failures in addition to protecting the PCB's.
- Integrated die electric cooling unit in the machine to maintain constant temperature of the die electric media and the machine tool casting to reduce the thermal effect.
- Integrated electronically controlled flushing system with 64 discrete steps which ensures the optimum high quality machining and reduce maintenance since no hydraulic valves.

10 Benchmark

- Sodick is recognized as the technology leader in EDM. The company is focused on developing machines that have the highest level of performance and precision in order that our customers can profit. Since Sodick was founded in 1976 it has continually set the benchmark in EDM performance



- 1976 – developed the world's first CNC die sinker EDM
- 1984 – developed the first high speed small hole EDM
- 1998 – linear motor sinker EDM introduced
- 1999 – linear motor wire EDM introduced
- 2004 – over 10,000 linear motor EDMs have been sold
- 2008 – over 20,000 linear motor EDMs have been sold
- Till date 29,000 linear motor EDMs have been sold
- Customer care and service are our priority and factory trained engineers to regionally balance the support throughout India.

*Machine specifications are subject to change without intimation. For more details contact local sales as below

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