

What is an electrostatic chuck?

The electrostatic chuck (ESC) is used in a variety of semiconductor processes to hold the wafer during processing. ESCs employ a platen with integral electrodes which are biased with high voltage to establish an electrostatic holding force between the platen and wafer, thereby "chucking" the wafer.

How to use a permanent electromagnetic chuck?

When a conventional permanent electromagnetic chuck is used, it is necessary to turn it off once and after lowering the magnetizing voltage, turn it on again in order to set a low magnetic force for straightening grinding operations.

When was magnetic chuck invented?

The company was founded in 1966 as named in Guang Dar Machining Shop and permanent type magnetic chuck was the major product at the time. The first generation of electrical magnetic chuck was developed in 1971 to meet a demand for large size grinding machine which got a very well reputation.

How does a Chuck work?

Thanks to finer pole pitches on the chuck work face, these chucks hold thin and wide workpieces firmly. Since electricity is supplied momentarily only to control the magnetomotive force when mounting/demounting a workpiece, little heat is generated internally to maintain accuracy.

What are the advantages of Electrostatic chucks?

Temperature control: Another notable advantage of electrostatic chucks is the capacity to control temperature during manufacturing. E-chucks use electricity to heat or cool the substrate as needed. This ability ensures optimal processing conditions and reduces thermal stress on sensitive materials.

What are E-Chuck power supplies?

E-chuck power supplies provide the voltage required to generate the electrostatic field. This generated energy allows the chuck to exert the desired force on the object. These power sources are critical in maximizing the e-chuck's performance and dependability in various manufacturing environments.

Custom-designed electromagnetic chucks by FERROMAGNET offer innovative solutions tailored to your specific requirements. Designed by our expert engineers and manufactured in our ...

tilt type electromagnetic chuck [model ket-u] large connecting tilt type electromagnetic chuck [model ket-uts] airup(TM) [model ketb] powerful waveform electromagnetic chuck [model ketn] ...

An electromagnetic chuck has adjustable holding force and allows the machining of large workpieces. It

requires power when in use, and the heat generated when it is energized may ...

powerful permanent electromagnetic chuck for heavy duty cutting [model ep-dwm] permanent electromagnetic chuck for cutting [model ep-q] ... electromagnetic lifma battery ace conveyor ...

Using electromagnetic, electro-permanent and permanent magnetic chucks for clamping and unclamping of the machined components saves time, allows the workpiece to be accessible ...

Electromagnetic chucks are specialized electromagnets used to hold ferromagnetic workpieces securely during machining, grinding, or other manufacturing processes. The workpiece is ...

Since internal heat generation and thermal distortion are minimal, highly precise machining is possible. Can be used in wet operations. These chucks are provided with T-grooves to make ...

Power Generation using the Electromagnetic Principle in Vehicle Suspension Poorna Chandra Naidu. G a, Vijay Kumar. B b, Deepika. Ch c, Kiran Kumar. A d, Siva Kumar. B e, Simhadri. K ...

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Standard Pole Rectangular Elelctro Magnetic Chuck offered comprise precision developed electromagnetic chucks that provide for powerful working action.Offering high suitability for ...

The ERP Electromagnetic Circular chuck is used for grinding applications. Features: High holding power * Heavy duty construction. Electromagnetic circular chuck with parallel poles.. For ring ...

By sensing the electric field between the chuck and substrate, electrode voltages can be programmed to cancel or augment stored dielectric charges. The ElectroGrip DR4, DR5, DR6, ...

Experts on magnets since 1991. Manufacture and sale of magnetic materials and systems. A wide range of products, knowledge, good price. Ferrites, neodymium, magnetic sheeting, magnetic ...

No heat generation and thus no thermal distortion due to temperature rise. Sine bar chuck Vacuum chuck ... electromagnetic chuck Very efficient since workpieces can be ...

electromagnetic chucks overcome! A permanent electromagnetic chuck specialized in securing long workpieces! Powerfully holds workpieces without jigs! [Application] Used for securing ...

A chuck controller dedicated to permanent electromagnetic chucks equipped with a demagnetizing function. Model EPS-D CHUCK MASTER* DEDICATED TO DEMAGNETIZING ...

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