Electrostatic Chuck

YiNGUAN 鼎冠半导体

Features

- Coulombic electrostatic chuck
- Bi-polar and multi-polar electrode design
- Suitable for UHV environments up to 10^{-5} Pa
- High clamping force
- Typical global flatness: 2μm PV (D = 300 mm)
- Flexible surface pattern design
- Suitable for non-magnetic environment

Description

Electrostatic chuck (ESC) is a silicon wafer clamping tool used in semiconductor processes. Based on the principle of electrostatic adhesion, ESC applies external high voltage to generate Coulomb adhesion force or J-R adhesion force to clamp the silicon wafer.

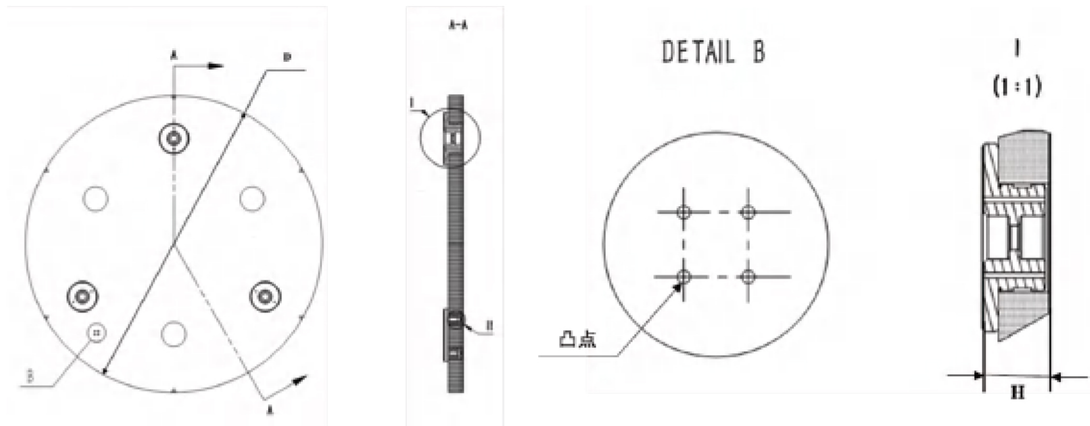
Why choose us:

1. This ESC and paired controller ensures good system performance.
2. Minimized de-clamping time.
3. Uniform and constant clamping force during wafer processing.

Applications

- E-Beam Inspection
- Wafer bonding
- CD-SEM
- Review-SEM

Interface Definition



General dimension, Unit: mm

Technical Specifications

	6inch ESC	8inch ESC	12inch ESC	Unit
Electrostatic type	Coulombic	Coulombic	Coulombic	
Number of electrodes	Bi-polar	Bi-polar	Bi-polar	
Accuracy				
Global flatness	<1	<1	<2	μm
Parallelism	<5	<5	<5	μm
Electrical properties				
Standard clamping voltage	1000	1000	1000	V
Leakage current	<5	<5	<5	nA
Performance parameter				
Clamping force	⩾10	⩾16	⩾40	N
Dimensions				
Diameter	144	194	294	mm
Thickness	12.6	12.6	12.6	mm

* Customized requirements accepted