

Description

The machine is used to etch facets of semiconductor wafers (up to the diameter of 4") with a mixture of nitric acid, hydrofluoric acid and acetic acid. After the etching process is over, the wafers are rinsed in a triple upstream cascade with demineralised water and they are dried with air blown by means of flat nozzles.

The etch tub is filled with a mixture of nitric acid, hydrofluoric acid and acetic acid in an adjustable ratio. The etch tub is manufactured from the material PVDF. The etch tub is closed with an automatic lid.

The machine is equipped with a manipulator which enables semiautomatic operation. The manipulator is located in the etching space, separated from the operator with transparent covers and with sliding door. The manipulator ensures movement of a clamping fixture with wafers in horizontal and vertical direction. Having the fixture with wafers been immersed in the chemical bath, a vertical movement of an arm is carried out by means of a compressed-air cylinder for better washing and this movement is completed with controlled shocks in order to remove superficial bubbles. While the clamping fixture is moving from the rinse tub into the etch tub, the surface of the hook is blown with pressure air from four nozzles.

The rinse tub with three cascades filled with demineralised water is used to rinse the etched facets of wafers. The rinse tub is made from polypropylene.

The tanks with acids in the rear part of the box are used to fill the etch tub with the mixture of acids.

Equipment and options:

- The frame of the machine is made from polypropylene (PP) and is fitted with adjustable feet.
- The working area with exhaustion where the following is located:
 - a separated space with the etch tub and with the manipulator;
 - the rinse tub with upstream cascades;
 - a manual shower and a suction device of liquids.
- The following is located on the front side of the box:
 - the control panel with control push-buttons and with the EMERGENCY STOP push-button;
 - the HMI control panel.
- The following is located on the rear side of the box:
 - THE MAIN SWITCH;
 - tanks with acids;
 - the rear control panel for replenishment of acids.

Basic technical data

Length :	1200 mm
Width :	938 mm
Height :	2240 mm
Weight :	330 kg

