Chapter 3
Operation of the Machine

3.1. General Description

The SUSS MA 8 Mask Aligner are designed for high resolution photolithography in a laboratory, development, or pilot production environment. It offers unsurpassed flexibility in the handling of irregularly shaped substrates of differing thickness, as well as standard size wafers up to 8" in diameter.

With the modular construction, the units lend themselves to ease of service. The functional groups are easily accessible and the subassemblies can be quickly exchanged.

The SUSS MA 8 Mask Aligner belongs to the new generation of state-of-the-art mask aligners, combining time proven features with newly developed technology for mask aligning wafers, substrates and partial wafers. They represent the further developments of the successful mask aligner SUSS MJB 3 for more than two decades the world-wide leader in its area of application.

With the SUSS MA 8, operated manually, all contact exposure programs (vacuum, hard, soft contact and proximity) are provided to print structures far into the submicron region.

X- and Y-shift are below 0.1 µm and not detectable by optical means. Wafers and substrates up to 6 mm thickness may be processed.

The two 400 nm versions provide resolution of 0.6 µm in vacuum contact. Using 300 nm or 250 nm exposure optics or an excimer laser improves resolution to 0.2 µm.

The SUSS IR transmission alignment systems for backside alignment are adaptable.