

Anilox Rollers Manufacturing Process

Production process of [anilox rollers](#) consists of the following operations:

1. Manufacturing of an anilox roll body
2. Quality control of the anilox roll body
3. Plasma coating of 25µm thick nickel sub-layer using plasma technology
4. Plasma Cr2O3 ceramic coating with a thickness of 200-250µm using plasma technology
5. Quality control of ceramic coating
6. Grinding process
7. Quality control of grinding
8. Laser engraving
9. Control of engraving uniformity along the surface of the anilox roll
10. Superfinishing after the engraving process
11. Final inspection
12. Packing of the anilox roll for further delivery to the customer

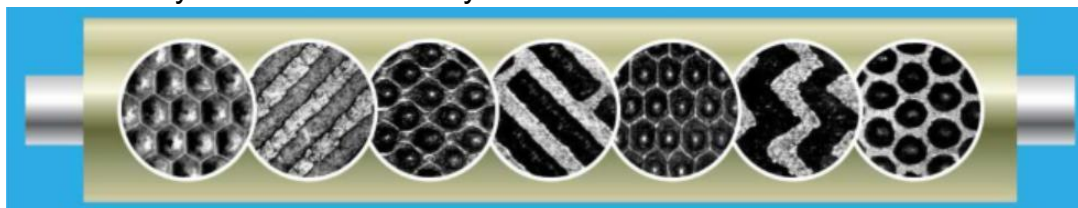
Quality Control

Internal quality control system covers a wide range of organizational and technical measures, starting with the quality assurance of raw materials and monitoring at all stages of the production process. It is important to determine engraving characteristics for their further evaluation. To ensure the quality of ceramic-coated anilox rolls, we use up to date optical methods to carry out the most accurate analysis of the anilox surface and the engraving process. These methods allow us to determine the geometrics of the cells to be engraved. Cell volume is calculated according to the results of a series of measurements, and subsequently the ink transfer of the anilox roll.

Selection of parameters and types of engraving

Before selecting parameters of an anilox roll the following factors should be taken into account:

1. Application of the anilox roll
2. Properties of inks and printed materials
3. Type and characteristics of the printing machine
4. Printing requirements and technical specifications of the cliché
5. Availability of a doctor blade system



Depending on the application of the anilox roll, one can engrave cells of various forms: hexagonal, linear, round, parquet, etc. Screening angle 30°, ±

45°, 60°. The maximum depth of cells is 100 μm .