# Equipment List / Coating Types



| No. | Designation | Description |
|---|---|---|
| **01** | **Automatic plating lines** | |
| 01.1 | **Plating lines 1+2 with cross transfer** | Equipped with flexible “Galvano Vario” control technology, enabling simple, highly precise programming of sequences. Mixed loads can be run at any time, with high flexibility and exposure times accurate to the second. The control system is designed for small and large series and provides batch traceability and batch logging of all process parameters. Laser-guided positioning system for millimetre-accurate positioning of plating racks.<br>Bath volumes range from 200 to 300 l. |
| 01.2 | **Plating line 3** | Equipped with flexible “Galvano Vario” control technology, enabling simple, highly precise programming of sequences. Mixed loads can be run at any time, with high flexibility and exposure times accurate to the second. The control system is designed for small and large series and provides batch traceability and batch logging of all process parameters. Laser-guided positioning system for millimetre-accurate positioning of plating racks.<br>Bath volumes range from 200 to 300 l. |
| 01.3 | **Barrel plating** | Designed for small parts (bulk goods), operated manually with trolley support, but can also be run automatically. Max. bath volume 300 l. |

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| No. | Electrolyte | Max. thickness | Hardness (HV) | Fineness (%) | Carat | Alloy content |
|---|---|---|---|---|---|---|
| 02 | Coating type | | | | | |
| 02.01 | Gold strike (for direct pre-gilding of stainless steel) | 10 µm | 165 | 99.7 | 23.9 | 0.3 wt% Co |
| 02.02 | Au 2N | 5 µm | 240 | 97.2 | 23.3 | 2.8 wt% Ni/In |
| 02.03 | Au 3N | 10 µm | 150 – 170 | 99.7 | 23.9 | 0.3 wt% Fe |
| 02.04 | Bright silver | on request | 80 – 120 | 99.8 | – | – |
| 02.05 | Palladium/nickel | 10 µm | 620 | – | – | 80 wt% Pd / 20 wt% Ni |
| 02.06 | Palladium/tin | 10 µm | 600 | – | – | 70 wt% Pd / 30 wt% Sn |
| 02.07 | Platinum | 1 µm | 500 | 99.9 | – | – |
| 02.08 | Copper, cyanide/acid | on request | 220 | – | – | – |
| 02.09 | Ruthenium, natural | 0.8 µm | 1,000 | – | – | – |
| 02.10 | Black ruthenium | 0.3 µm | 1,000 | – | – | – |
| 02.11 | Tin-nickel | 3 µm | 780 – 850 | – | – | 65 wt% Sn / 35 wt% Ni |
| 02.12 | Tin-nickel, anthracite | 3 µm | 780 – 850 | – | – | 65 wt% Sn / 35 wt% Ni |
| 02.13 | Matt/semi-bright/bright nickel | on request | up to 600 | – | – | – |
| 02.14 | Electroplated zinc, incl. thick-film passivation | 20 µm | – | – | – | – |
| 02.15 | Anti-tarnish protection | Copper / silver | – | – | – | – |
| 02.16 | Cathodic dip coating (KTL) | Cathodic dip coating in various colours, on request | – | – | – | – |

# Equipment List / Coating Types



| No. | Designation | Units | Description |
|---|---|---|---|
| 03 | Cleaning processes | | |
| 03.01 | Ultrasonic | 5 | Aqueous cleaning baths with ultrasonic support for rack and basket goods, capacity 80 to 400 l each. |
| 03.02 | Degreasing, compact flood system | 2 | Full-vacuum parts cleaning system for halogen-free hydrocarbons, cleaning supported by ultrasound and flooding, state-of-the-art filtration and automatic oil separation for consistent cleaning quality, optimum energy efficiency through integrated heat recovery, fully automated loading and unloading, glass chamber lid with lighting for visual inspection of the cleaning, designed for a basket size of 530 × 320 × 200 mm. |
| 04 | Etching technology | | |
| 04.01 | Spray etching | 3 | To meet customer requirements for diverse and demanding surfaces, Surpro operates wet-chemical etching systems. All etching processes work closely with upstream masking and laser techniques and make even complex surface patterns possible.<br>The resulting capabilities are as follows:<br>– Etching of flat and rotationally symmetrical parts, both over large areas and partially<br>– Various etching depths up to 0.3 mm with sharp edges<br>– Etching solutions defined by the material<br>Etchable materials: stainless steel, silver, copper alloys |