

Electrical requirements to 1-layer impression rollers when using Eltex ESA GNN75 and GNN75P Printing Assists

In order to guarantee a perfect function of the electrostatic printing assist (ESA) impression roller coatings with certain electrical features are required. In case of the 1-layer impression roller these features are described by the total volume resistance **Rvt**.

The impression roller coating must have full surface electrical contact with the conductive roller body.

A perfect ESA function is given for total volume resistances in the area of:

Rvt = 50 kΩm...200 kΩm/Impression roller length in meter

Coatings which are outside Eltex specifications can still lead to satisfactory printing results depending on paper quality. Impression rollers with excessively low impedance can result in insufficient print quality in the edge zones. Impression rollers with excessively high impedance can lead to a loss in printing quality. The responsibility for the use of such coatings has to be agreed between the user and the manufacturer of the coatings.

With the Eltex ESA GNN75 / GNN75P it is possible to measure the total volume resistance **Rvt** on the installed impression roller under operating conditions.

Please refer to the operating instructions of the respective system for further details.

The surface resistance **Ro** of the coating can be measured during incoming goods inspection of the impression rollers.

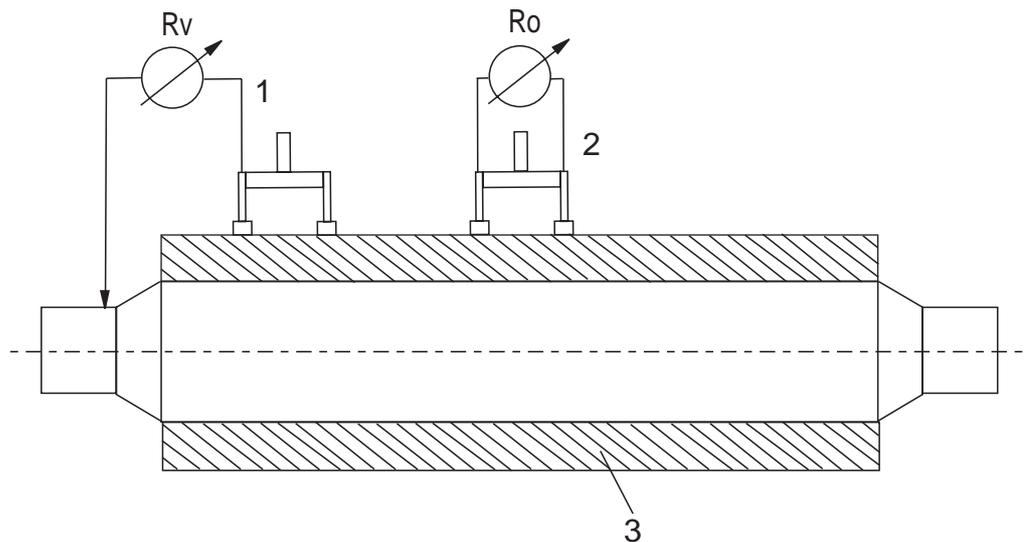
As the correlation between the required **Rvt** and the 'auxiliary quantity' **Ro** depends on the recipe of the impression roller coating, for each coating the manufacturer of the coatings has to inform the user of the range of the surface resistance value **Ro** which corresponds to the required range of the volume resistance **Rvt**.

We recommend indicating the range of surface resistance on the impression roller certificate for each impression roller.

To determine the resistance **Ro** see page 2.

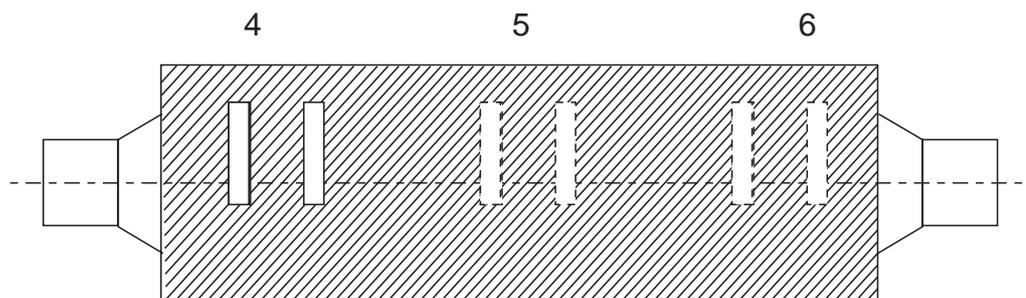
Measuring specification for 1-layer impression rollers when using Eltex ESA GNN75 and GNN75P Printing Assists

The measurement is carried out with the Tera-Ohm-Meter, type 6206, and the measuring bow, type 6220. The contact areas of the measuring bow are moisturized with normal tap-water. The required measuring values can be taken from the electrical requirements to impression rollers (page 1) and from the impression roller certificate of the manufacturer.



Measuring

- 1 Tera Ohm Meter
type 6206
- 2 Measuring bow
type 6220
- 3 Semi-conductor
- 4 Side A
- 5 Middle
- 6 Side B



Surface resistance Ro

Measuring voltage = 100 V.

The measuring values are to be determined at the temperature specified by the impression roller certificate. The measurement must be made at a minimum of 3 places: side A, middle and side B. A max. deviation of 20% is allowed with regard to the mean value.

Volume resistance Rv

Measuring voltage = 100 V.



**electrostatic
innovations**

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