

8250 Combination Pliers Manufacturing Process

1.

Blank cropped to size from C50 steel.



2.

Hot forged in a drop forging die. The excess burr is removed using an eccentric press.



3.

The blanks are 'normalised' to obtain an even finer grain and a more uniform structure with optimum strength. After descaling, the blanks are coined for subsequent operations.



4.

The head is machined in a CNC-controlled machining centre. The rivet hole is drilled and counter-bored. The joint clearance and the outer contour are milled. The geometry of the joint area and the gripping geometry are broached.



5.

The joint faces are precision milled. The pliers head takes on its final form.



6.

The moving and fixed pliers legs are riveted together. A smooth-moving joint with no play is an essential requirement for a safe one-handed operation.



7.

In a chamber hardening kiln, the pliers are hardened in a protective gas atmosphere, quenched in oil and finally annealed. The design of the hardening kiln ensures that the process gases are uniformly distributed, which has a positive effect on the material properties.



8.

The cutting edges of GEDORE pliers are once again induction hardened. The additional hardness that this achieves ensures a good cutting performance and extended durability of the tool.



9.

The pliers head is ground to achieve a flush geometry.



10.

The surface is cleaned by sand blasting. The removal of scale and grease is necessary in preparation for the electroplating process.



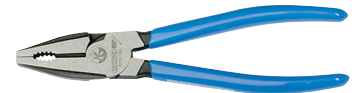
11.

Nickel plated and matt-chrome plated. The electrolytically deposited nickel coating provides the corrosion protection. The electroplated chrome improves the look and gives the pliers a perfect finish.



12.

TL pliers are painted black by a robot, using water soluble paint.



13.

The two-component handles are pressed on and bonded.



The pliers are laser marked and the joint is oiled.

Tip: an occasional drop of oil on the joint will ensure that your pliers retain ease of movement.

VDE pliers are subjected to an individual test in accordance with DIN EN 60900 / IEC 60900:2004.

GEDORE Austria has been a certified manufacturing plant for VDE protective insulated pliers since 2003.

