the working surface and/or the contact surface of the transport belt by the generation of a negative pressure below the working surface through the working surface and the transport belt, such that the printing process can be carried out reliably without additional retaining elements. Similar printing devices can also be found in the publications EP 2 581 951 B1, US 2013/0052334 A1 and US 2012/0244702 A1.

Due to the inertia of the disclosed printing units, the operating speed of the printing device is limited, or the weight of the printing units must be reduced with great material expenditures in order to reduce its inertia. However, this entails a corresponding additional expense, in particular if the robustness of the printing device is to be maintained. In particular, a high moving mass is created when the supply roller and/or collection roller have to be moved at the same time. The mass is further increased if large transport belt supplies on the supply roller are desired, with the aim of ensuring minimal maintenance interventions for changing the supply roller and collection roller, and the associated downtime of the entire production line.

The object of the invention is therefore that of creating a printing device which has a printing unit with reduced inertia, without the necessary material and cost inputs becoming uneconomical.

Summary

In an aspect, the present disclosure refers to a printing device for printing substrates such as circuit boards, wafers or solar cells, comprising at least one movably mounted printing unit with a working surface on which the substrate to be printed can be placed, wherein the printing unit is paired with a transport belt device which has a supply roller with a transport belt wound thereon, and has a collection roller for winding up the transport belt, as well as two deflecting surfaces formed by deflecting rollers paired with the working surface, wherein the transport belt is guided by the supply roller over one of the deflecting surfaces and onto the working surface in order to form a contact surface for the substrates, and by the working surface over the other deflecting surface to the collection roller, characterized in that the deflecting surfaces can be moved together with the respective printing unit, and the supply roller and the collection roller are held on the printing device in a

CLAIMS

1. A printing device for printing substrates such as circuit boards, wafers or solar cells, comprising at least one movably mounted printing unit with a working surface on which the substrate to be printed can be placed, wherein the printing unit is paired with a transport belt device which has a supply roller with a transport belt wound thereon, and has a collection roller for winding up the transport belt, as well as two deflecting surfaces formed by deflecting rollers paired with the working surface, wherein the transport belt is guided by the supply roller over one of the deflecting surfaces and onto the working surface in order to form a contact surface for the substrates, and by the working surface over the other deflecting surface to the collection roller, **characterized in that** the deflecting surfaces can be moved together with the respective printing unit, and the supply roller and the collection roller are held on the printing device in a stationary manner.

2. The printing device according to claim 1, **characterized in that** the supply roller and the collection roller are arranged below the printing unit.

3. The printing device according to any one of the preceding claims, characterized by a print head, wherein the printing unit can move between a processing position paired with the print head and a substrate exchange position paired with a feed- and removal device for the substrates.

4. The printing device according to any one of the preceding claims, **characterized in that** the printing unit is at least substantially displaceable in a horizontal plane.

5. The printing device according to any one of the preceding claims, **characterized in that** the transport belt device has at least one tensioning device, between the supply roller and/or the collection roller and at least one of the deflecting rollers, which acts on the transport belt in order to keep the transport belt tensioned at least in the substrate exchange position.

6. The printing device according to claim 5, **characterized in that** the tensioning device has at least one tensioning roller which is preloaded against the transport belt between the collection roller or the supply roller and the at least one deflecting roller.

7. The printing device according to claim 6, **characterized in that** each of the tensioning rollers is preloaded by spring force against the transport belt.

8. The printing device according to any one of the preceding claims, **characterized in that** the transport belt device has at least one movably mounted deflecting roller which works together with the transport belt, and has a controllable actuator to move the deflecting roller.

9. The printing device according to claim 8, **characterized in that** the transport belt device has two first guide tensioning rollers between the supply roller and one of the deflecting rollers and/or two second guide tensioning rollers between the deflecting roller and the collection roller, wherein the at least one movably mounted deflecting roller is displaceable between the first guide tensioning rollers and/or the second guide tensioning rollers.

10. The printing device according to claim 9, characterized in that the at least one movably mounted deflecting roller is linearly displaceable.

11. The printing device according to claim 3, **characterized in that** the supply roller and the collection roller are each arranged vertically offset from the deflecting surfaces of the printing unit in the processing position and in the substrate exchange position.

12. The printing device according to any one of the preceding claims, **characterized in that** the transport belt device has a verification device for contactless detection of transport belt contamination.

13. The printing device according to claim 12, **characterized in that** the verification device is arranged on the printing device in such a manner that the verification device is opposite the transport belt running between the other deflecting surface and the collection roller in the substrate exchange position of the printing unit.

14. The printing device according to any one of the preceding claims, **characterized in that** a cleaning device is included for removing dirt from the transport belt.

15. The printing device according to claim 14, **characterized in that** the cleaning device is arranged on the printing device in such a manner that the cleaning device is opposite the transport belt running between the other deflecting roller and the collection roller in the substrate exchange position of the printing unit.

16. The printing device according to any one of the preceding claims, **characterized in that** the transport belt is designed as a paper web, film web, or plastic vacuum belt.

17. The printing device according to claim 3, **characterized in that** the printing device has two displaceable printing units, each of which is paired with a transport belt device, wherein the printing units can be moved alternately into the processing position paired with the print head.

18. The printing device according to claim 17, **characterized in that** the printing device comprises two feed- and removal devices for the substrates, and that each of the printing units is paired with one of the feed- and removal devices.

19. The printing device according to claim 18, **characterized in that** each of the feed- and removal devices has a feed conveyor belt and a removal conveyor belt, which lie one above the other and are adjustable in height.

20. The printing device according to claim 19, **characterized in that** the feed conveyor belt and the removal conveyor belt are arranged on the same, height-adjustable holder.

21. The printing device according to any one of the claims 17 to 20, **characterized in that** each of the printing units in the substrate exchange position of the corresponding printing unit is paired with at least one sensor of an adjusting device used for detecting and correcting a position and/or orientation of at least one substrate situated on the printing unit.

22. The printing device according to claim 21, characterized in that the at least one sensor is a camera sensor.