CLAIMS

1. A multi-station operation glue dispenser, comprising:

at least two conveying assemblies, each of the at least two conveying assemblies having an operation area; and

an operation mechanism configured to move to the operation area of any of the at least two conveying assemblies and perform at least two repetitive operations on a workpiece placed in the operation area, a preset operation waiting time being present between the two repetitive operations;

wherein when the operation mechanism is located in the operation area of one of the at least two conveying assemblies, finishes one operation of the at least two repetitive operations on a workpiece in the operation area of the one of the at least two conveying assemblies and is in the operation waiting time after which a next operation of the at least two repetitive operations is to be performed, the operation mechanism moves to the operation area of another conveying assembly of the at least two conveying assemblies and performs an operation on a workpiece placed in the operation area of the other conveying assembly,

wherein each of the at least two conveying assemblies comprises a first conveying unit, a second conveying unit and a third conveying unit, the first conveying unit, the second conveying unit and the third conveying unit are independent from each other and are sequentially arranged along a conveying direction, the workpiece is configured to move along the first conveying unit, the second conveying unit and the third conveying unit sequentially, the operation area corresponds to the second conveying unit, and the operation mechanism is configured to perform an operation on a workpiece that moves to the second conveying unit,

the multi-station operation glue dispenser further comprises:

a preheating platform located in the first conveying unit and configured to preheat a workpiece that moves to the first conveying unit;

an operation platform located in the second conveying unit and configured to perform, by cooperating with the operation mechanism, glue dispensing operation on the preheated workpiece that moves to the second conveying unit; and

a temperature keeping platform located in the third conveying unit and configured to perform a temperature keeping process on the workpiece that moves to the third conveying unit and has been subject to the glue dispensing operation.

2. The multi-station operation glue dispenser according to claim 1, wherein operation time for the operation mechanism to perform any one operation is equal to or larger than the operation

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waiting time.

3. The multi-station operation glue dispenser according to claim 1, wherein all of the first conveying unit, the second conveying unit and the third conveying unit are mounted on a same fixing base, and each of the first conveying unit, the second conveying unit and the third conveying unit comprises a conveying rail, the conveying rail is installed on the fixing base and is capable of moving up and down and is provided with a conveying passage extending along the conveying direction of the conveying rail, and the workpiece is configured to move along the conveying rail.

4. The multi-station operation glue dispenser according to claim 3, further comprising:

three elevating mechanisms which are a first elevating mechanism, a second elevating mechanism and a third elevating mechanism respectively, the first elevating mechanism being connected with the conveying rail of the first conveying unit, the second elevating mechanism being connected with the conveying rail of the second conveying unit, the third elevating mechanism being connected with the conveying rail of the third conveying unit, and each of the three elevating mechanisms being configured to control its corresponding conveying rail to move up and down.

5. The multi-station operation glue dispenser according to claim 4, wherein each of the three elevating mechanisms is configured to control its corresponding conveying rail to move between a first state and a second state, and when any of the conveying rails is in the first state, the conveying rail is in a raised state and the workpiece is spaced apart from an adsorption module, and when any of the conveying rails is in the second state, the conveying rail is in a lowered state and the workpiece is in contact with the corresponding adsorption module.

6. The multi-station operation glue dispenser according to claim 5,

wherein the multi-station operation glue dispenser further includes three heating platforms, the three heating platforms are provided on the first conveying unit, the second conveying unit and the third conveying unit respectively and are mounted onto a same fixing base, each of the three heating platforms is configured to heat the workpiece that moves onto the heating platform, and each of the three heating platforms comprises a heating module, and

wherein each of the elevating mechanisms comprises:

a jacking cylinder provided on the conveying passage and located below the heating module, wherein the jacking cylinder is connected with the conveying rail to drive the conveying rail to move from the second state to the first state; and

an elastic connecting element having one end connected with the fixing base and another end connected with the conveying rail, wherein the elastic connecting element is configured to pull the conveying rail to move from the first state to the second state through an elastic force when a jacking action force of the jacking cylinder is released.

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7. The multi-station operation glue dispenser according to any of claims 1-6, further comprising:

a material taking mechanism provided on the first conveying unit of each of the at least two conveying assemblies and configured to clamp a tray loaded with a workpiece from a tray loading/unloading mechanism.

8. An operation method for the multi-station operation glue dispenser of claim 1, wherein the multi-station operation glue dispenser comprises two conveying assemblies which are defined as a first conveying assembly and a second conveying assembly respectively, the operation method comprising:

performing, by the operation mechanism, one operation on a workpiece on the first conveying assembly;

moving the operation mechanism to the second conveying assembly, and performing, by the operation mechanism, one operation on a workpiece on the second conveying assembly;

moving the operation mechanism to the first conveying assembly again, and performing, by the operation mechanism, a next operation on the workpiece located on the first conveying assembly which has been subject to one operation; and

moving the operation mechanism to the second conveying assembly again, and performing, by the operation mechanism, a next operation on the workpiece located on the second conveying assembly which has been subject to one operation;

wherein the operation mechanism is configured to move between the first conveying assembly and the second conveying assembly and consecutively perform a next operation on the workpiece on each of the first and second conveying assemblies until a preset number of operations are performed.

9. The operation method according to claim 8, wherein when the operation mechanism has performed an operation on the workpiece on one of the two conveying assemblies and is in the operation waiting time after which a next operation is to be performed, the operation mechanism moves to the other conveying assembly and performs an operation on the workpiece on the other conveying assembly.

10. The operation method according to claim 9, wherein when the operation mechanism moves to the other conveying assembly and performs an operation on the workpiece on the other conveying assembly, a condition that the operation waiting time of the current workpiece lapses needs to be met.

11. The operation method according to claim 8 or 9, wherein the operation and the next operation have the same operation trajectory and the same operation direction.

12. The operation method according to claim 8 or 9, wherein three conveying assemblies are

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comprised, the operation mechanism is configured to move among the three conveying assemblies and consecutively perform an operation on a workpiece corresponding thereto until a preset number of operations are performed.

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