Claims

1. Conveyor system for the conveying of goods items (16), comprising at least one transport container (10) for accommodating a goods item and a controlled, drivable and movable, driverless transport unit (12) for accommodating, conveying and discharging a transport container (10);

where the transport unit (12) comprises a discharge device (30) which is designed for discharge of the transport container (10) from the transport unit (12), and for unloading a goods item (16), situated on the accommodated transport container (10), from the transport container (10), and further comprises a retaining mechanism (50) for establishing a detachable connection between the transport container (10) and the transport unit (12), by means of which the transport container (10) is to be held on the transport unit (12).

2. Conveyor system in accordance with Claim 1, characterised in that the discharge device (30) comprises a tipping device for tipping an accommodated transport container (10) for the purpose of unloading goods items (16) from the transport container (10), where the retaining mechanism (50) is designed to retain the transport container (10) on the transport unit (12) during a tipping process.

3. Conveyor system in accordance with Claim 1, or 2, characterised by a conveyor (14) having a transfer point (40), at which a transport container (10) can be transferred from the driverless transport unit (12) to the conveyor (14) or vice-versa.

4. Conveyor system in accordance with Claim 3, characterised in that the conveyor (14) comprises a track system, on which a transport container (10) is conveyable.

5. Conveyor system in accordance with one of the preceding Claims, characterised in that the transport container (10) has a coupling section with first retaining means (18) and the retaining mechanism (50) has a second retaining means (20) for interaction with the first retaining means (18).

6. Conveyor system in accordance with Claim 5, characterised in that the first retaining means (18) are designed to engage interlockingly with the second retaining means (20), where the first retaining means (18) may be projections and the second retaining means (20) may be recesses corresponding to the projections, or vice-versa.

7. Conveyor system in accordance with one of the preceding Claims, characterised in that the retaining mechanism (50) comprises detachable clamping- or tensioning elements for interacting with a transport container (10), whereby the transport container (10) is fixable to the transport unit (12).

8. Conveyor system in accordance with one of the preceding Claims, characterised in that the transport container (10) has an accommodation section, which defines an upper, object bearing surface (32) for goods items (16), where the transport container (10) may be X-ray permeable.

9. Conveyor system in accordance with one of the preceding Claims, characterised in that the transport unit (12) has steerable rollers or wheels (28).

10. Conveyor system in accordance with Claim 8, characterised in that the upper object bearing surface (32) is concave upward in cross-section, in order to form a hollow for accommodation of the goods item(s) (16).

11. Procedure for operating a conveyor system (1) in accordance with one of the preceding claims, comprising the following steps:

1) Loading of a transport container (10) with a goods item (16);

2) Picking up of the loaded transport container (10) by a transport unit (12) and connection of the transport unit (12) to the transport container (10) by means of the retaining mechanism (50);

3) Conveying of the loaded transport container (10) by the transport unit (12);

4) Unloading of the goods item (16) by means of the discharge device (30) or by detachment of the connection between the transport container (10) and the transport unit (12) by means of the retaining mechanism (50) and discharge of the transport container (10) loaded with the goods item (16).

12. Procedure in accordance with Claim 11, comprising the steps:

1.1) Transfer of the loaded transport container (10) to a conveyor (14);

1.2) Conveying of the loaded transport container (10) on the conveyor (14);

1.3) Transfer of the loaded transport container (10) from the conveyor (14) to a transport unit (12).

13. Procedure in accordance with Claim 12, further comprising the step:

4.1) Detachment of the connection between the transport container (10) and the transport unit (12) by means of the retaining mechanism (50) and transfer of the loaded transport container (10) from the transport unit (12) to the conveyor (14).

14. Procedure in accordance with Claim 12, or 13, further comprising the step: Taking over of a transport container (10), either empty or loaded with a goods item (16), by a transport unit (12) from the conveyor (14), or transfer in reverse direction.

15. Procedure in accordance with one of the Claims 11 to 14, characterised in that step 4) of unloading of the goods item (16) is carried out while the transport container (10) is connected to the transport unit (12), the goods item (16) being tipped out during travel.