

Claims

1. A passenger seating arrangement in an aircraft cabin, the passenger seating arrangement comprising a
5 column of seat units located adjacent an aisle, the column of seat units and the aisle both extending in a longitudinal direction parallel to the longitudinal axis of the aircraft cabin, and wherein
the column comprises a multiplicity of seat units,
10 arranged consecutively along the longitudinal direction,
and wherein each seat unit comprises a plurality of moveable seating elements such that the seat unit is configurable between a seating configuration in which the seating elements are arranged to form a seat having a
15 seat pan and seat back, and a flat-bed configuration in which the seating elements are arranged to form a surface for a flat-bed,
and wherein in each seat unit, the seating elements are orientated at an acute angle to the longitudinal
20 direction and face inwardly towards the aisle,
and wherein each seat unit comprises a foot-receiving structure for receiving the feet of a passenger when the unit is in a flat-bed configuration, the spacing between the foot-receiving structure of a seat unit and
25 the foot-receiving structure of a seat unit to one side of it in the column defining an access opening to the seat unit,
wherein the access opening has a first width for access by an able-bodied passenger;
30 and wherein at least one of the seat units is configurable into a disabled-access configuration in which an access opening is temporarily widened from the first width to a second width, greater than the first

width, for enabling a disabled passenger to access a seat unit.

2. A passenger seating arrangement according to claim
5 1, wherein the first width is the minimum width of the access opening.

3. A passenger seating arrangement according to claim 1
10 or claim 2, wherein the second width is at least the width of the aisle.

4. A passenger seating arrangement according to any
preceding claim, wherein at least part of one of the
foot-receiving structures bordering the access opening is
15 moveable, so as to temporarily widen the access opening from the first width to the second width when the unit is in the disabled-access configuration.

5. A passenger seating arrangement according to claim
20 4, wherein the foot-receiving structure of each seat unit comprises an end-wall arranged to shield the passenger's feet from the aisle, and wherein at least part of the end-wall is moveable, so as to temporarily widen the access opening from the first width to the second width.
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6. A passenger seating arrangement according to claim
5, wherein at least part of the end-wall is moveable to
one side, so that when moved to one side, the access
opening is temporarily widened from the first width to
30 the second width.

7. A passenger seating arrangement according to claim
4, wherein substantially all of the one of the foot-
receiving structures bordering the access opening is
35 moveable, so as to temporarily widen the access opening

from the first width to the second width when the unit is in the disabled-access configuration.

8. A passenger seating arrangement according to claim 5 7, wherein the foot-receiving structure is rotatable to a rotated position, so as to temporarily widen the access opening from the first width to the second width when the unit is in the disabled-access configuration.

10 9. A passenger seating arrangement according to claim 7 or claim 8, wherein the foot-receiving structure is translatable to a translated position, so as to temporarily widen the access opening from the first width to the second width when the unit is in the disabled-
15 access configuration.

10. A passenger seating arrangement according to claim 4, wherein the foot-receiving structure comprises an upper surface for forming a utility surface above the
20 passenger's feet, the utility surface being for use by a passenger located in the adjacent seat unit, and wherein, the upper-surface is moveable, so as to temporarily widen the access opening from the first width to the second width when the unit is in the disabled-access
25 configuration.

11. A passenger seating arrangement according to claim 10, wherein the upper surface is moveable to a lowered position.

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12. A passenger seating arrangement according to claim 11, wherein in the lowered position the upper surface is arranged as a transfer surface for transferring the passenger into the seat unit.

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13. A passenger seating arrangement according to claim
12, wherein the transfer surface is substantially
coplanar with the seat pan, to create a transfer surface
over which the disabled passenger may move to access the
5 seat pan.

14. A passenger seating arrangement according to any
preceding claim, wherein the foot-receiving structure of
each seat unit comprises a foot-supporting surface
10 arranged to support the passenger's feet when the unit is
in the flat-bed configuration.

15. A passenger seating arrangement according to any
preceding claim, wherein each seat unit comprises an in-
15 flight entertainment (IFE) monitor, the IFE monitor being
configurable between a stowed position and an in-use
position, and wherein the monitor is further configurable
to an access position for facilitating access to the seat
unit.

20 16. A passenger seating arrangement according to claim
15, wherein in the access position the spacing above the
opening, between adjacent monitors, is widened relative
to when the monitor is in the stowed position.

25 17. A passenger seating arrangement according to any
preceding claim, wherein in the disabled-access
configuration, at least one of the seating elements is
moved, relative to its position in the seating
30 configuration, into a location in proximity to the access
opening.

18. A passenger seating arrangement according to claim
17, wherein in the disabled-access configuration, the
35 seat pan is moved forward, relative to the position in

the seating configuration, into the location in proximity to the access opening.

19. A passenger seating arrangement according to claim 5 17 or claim 18, wherein in the disabled-access configuration, the seat unit is moved into the flat-bed configuration in which the seating elements are arranged to form the surface for the flat-bed.
- 10 20. A passenger seating arrangement according to any preceding claim, wherein the acute angle at which the seating elements are orientated to the longitudinal direction is at least 45 degrees.
- 15 21. A passenger seating arrangement according to claim 20, wherein the acute angle at which the seating elements are orientated to the longitudinal direction is between 47 and 51 degrees.
- 20 22. A passenger seating arrangement according to claim 21, wherein the acute angle at which the seating elements are orientated to the longitudinal direction is substantially equal to 49 degrees.
- 25 23. A passenger seating arrangement according to any preceding claim, wherein the pitch between consecutive seat units in the column is between 27 and 29 inches.
24. A passenger seating arrangement according to claim 30 23, wherein the pitch between consecutive seat units in the column is substantially equal to 28 inches.
25. A passenger seating arrangement according to any preceding claim, wherein in the flat-bed configuration, 35 the bed length is at least 75 inches.

26. A passenger seating arrangement according to claim 25, wherein in the flat-bed configuration, the bed length is between 77 and 78 inches.

5 27. A passenger seating arrangement according to any preceding claim, wherein the column of seat units is adjacent the aisle on one side, and adjacent the aircraft sidewall on the other side.

10 28. A passenger seating arrangement according to claim 27, wherein the cabin comprises a second column of seat units on the opposite side of the aisle, the second column being arranged as described with reference to the first column.

15 29. A passenger seating arrangement according to claim 28, wherein the aisle extends along the centre line of the cabin and the second column is adjacent the aisle on one side, and adjacent the aircraft sidewall on the other side.
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30. A multiplicity of seat units for forming the passenger seating arrangement according to any preceding claim.

25 31. A seat unit for use as one of the seat units in the passenger seating arrangement of any of claims 1 to 29.

32. Method of providing access, for a disabled passenger, to a seat unit in a passenger seating arrangement, the passenger seating arrangement comprising a multiplicity of seat units, each having a respective access opening having a first width for access by an able-bodied passenger;

35 and wherein the method comprises:

temporarily configuring a seat unit into a disabled-access configuration in which an access opening is widened from the first width to a second width, greater than the first width, for enabling a disabled passenger
5 to access the seat unit.

33. A passenger seating arrangement for use in an aircraft cabin, the passenger seating arrangement comprising a column of seat units arranged in an inwardly
10 facing herringbone,

wherein each seat unit is configurable between a seating configuration and a flat-bed configuration,

wherein each seat unit has an access opening for accessing the respective seat unit,

15 and wherein at least one of the seat units is configurable into a disabled-access configuration in which an access opening is temporarily widened, for enabling a disabled passenger to access the seat unit.

20 34. A passenger seating arrangement according to claim 33, wherein each seat unit comprises an end-wall partially enclosing an ottoman, and wherein in the disabled-access configuration the end-wall is temporarily moved to an access position thereby widening the access
25 opening to allow disabled passenger access to the seat unit.

35. A passenger seating arrangement according to claim 33 or claim 34, wherein the seat units are in a high
30 angle/low pitch herringbone, for use on a single aisle aircraft.

36. A seat unit for use as one of the seat units in the passenger seating arrangement of any of claims 33 to 35.

5 37. A structure for bordering an access opening to a seat unit of any preceding claim, wherein at least part of the structure is moveable, so as to temporarily widen the access opening from a first width to a second width.

10 38. A structure according to claim 37 wherein the structure is a foot-receiving structure for receiving the feet of a passenger when the seat unit is in a flat-bed configuration.

15 39. A structure according to claim 38 wherein the foot-receiving structure comprises an end-wall arranged to shield the passenger's feet from the aisle, and wherein at least part of the end-wall is moveable, so as to temporarily widen the access opening from the first width to the second width.

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