

CLAIMS:

1. An outlet valve for an ostomy appliance comprising:
an axle defining a hollow bore for receiving a liquid output from the ostomy
5 appliance, the axle comprising a curved lateral wall; and
an outlet element comprising a cap arranged concentrically with the axle and an
outlet tube affixed to the cap;
wherein a valve opening is defined in the curved lateral wall; and
the cap is rotatable around the axle to move from a closed configuration in
10 which the valve opening is not in liquid communication with the outlet tube to an
open configuration in which the valve opening is in liquid communication with
the outlet tube;
wherein the outlet valve further comprises at least one seal configured to
provide sealing between the cap and the axle around a circumference of the
15 axle and sealing between the intake opening and the valve opening when the
outlet element is in the closed configuration.
2. An outlet valve as claimed in claim 1 wherein the at least one seal comprises a
continuous first seal configured to provide sealing between the cap and the axle
20 around a circumference of the axle and wherein the distance between the first seal
and a basal end of the axle varies around the circumference of the axle.
3. An outlet valve as claimed in claim 2 wherein the first seal follows a curved or
stepped path around the curved lateral wall.
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4. An outlet valve as claimed in claim 2 or claim 3 wherein at a first circumferential
position of the axle, the first seal is at a distance from the basal end that is less than
or equal to a distance from the basal end to a proximal edge of the valve opening.
- 30 5. An outlet valve as claimed in claim 4, wherein at a second circumferential position
of the axle, the first seal is at a distance from the basal end that is greater than or
equal to a distance from the basal end to a distal edge of the valve opening.
- 35 6. An outlet valve as claimed in claim 5 wherein the first circumferential position is
opposite the second circumferential position of the axle.

7. An outlet valve as claimed in claim 5 or claim 6 wherein the outlet element is rotatable to a fully open position wherein;
the outlet element is in the open configuration; and
5 wherein the intake opening is fully aligned with the valve opening.
8. An outlet valve as claimed in any one of claims 5 to 7 wherein in the closed configuration the intake opening is arranged at the second circumferential position, such that the first seal is arranged between the intake opening and the valve
10 opening.
9. An outlet valve as claimed in any of claims 4 to 8 wherein the first circumferential position is a circumferential position of the of the valve opening.
- 15 10. An outlet valve as claimed in any preceding claim further comprising an annular second seal arranged around a circumference of the axle.
11. An outlet valve as claimed in claim 10 wherein a distance between the annular second seal and a basal end of the axle is constant around the circumference of the
20 axle.
12. An outlet valve as claimed in claim 10 or claim 11 wherein the annular second seal is arranged between the basal end of the axle and a proximal edge of the valve opening.
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13. An outlet valve as claimed in any preceding claim wherein the outlet tube comprises an intake opening, wherein the outlet tube is configured to rotate with the cap such that on rotation of the cap the intake opening of the outlet tube is moved between an open configuration in which the intake opening is in liquid communication with
30 the valve opening and a closed configuration in which the intake opening is not in liquid connection with the valve opening.
14. An outlet valve as claimed in claim 13 wherein in the open configuration at least a part of the intake opening is arranged between the valve opening and the first seal

such that at least a portion of the intake opening is in liquid communication with the valve opening.

- 5 15. An outlet valve as claimed in any preceding claim wherein the cap comprises a curved cap wall defining a generally cylindrical cavity for receiving the axle such that the axle is rotatably arranged within the curved cap wall.
- 10 16. An outlet valve as claimed in claim 15 wherein the cap further comprises a cap end portion extending across a front end of the generally cylindrical cavity.
- 15 17. An outlet valve as claimed in any preceding claim wherein the axle is arranged on a backing flange for attachment to an outer face of the ostomy appliance, and protrudes from the backing flange away from the outer face of ostomy appliance in use.
- 20 18. An outlet valve as claimed in claim 1 wherein, the at least one seal comprises a first seal configured to provide sealing around a perimeter of the intake opening when the outlet element is in the closed position, the first seal being integrally formed with a second seal configured to provide sealing between the cap and the axle around a circumference of the axle.
- 25 19. An outlet valve as claimed in claim 18 wherein, the axle comprises an axle end wall, wherein the axle end wall is optionally generally planar.
- 30 20. An outlet valve as claimed in claim 18 or 19 wherein the first seal comprises a gasket seal arranged on the curved lateral wall of the axle, the first seal being spaced apart from the valve opening around the circumference of the axle.
21. An outlet valve as claimed in claim 20 wherein the gasket seal has a profile corresponding to the shape of the intake opening.
22. An outlet valve as claimed in claim 21 wherein the outlet tube is configured to rotate with the cap such that on rotation of the cap the intake opening of the outlet tube is moved between an open position in which the intake opening is in liquid

communication with the valve opening and a closed position in which the intake opening is not in liquid connection with the valve opening.

- 5 23. An outlet valve as claimed in claim 22 wherein in the closed position the first seal is aligned with and arranged around a periphery of the intake opening, thereby providing a seal between the intake opening and the curved lateral wall of the axle.
- 10 24. An outlet valve as claimed in any of claims 18 to 23 wherein the cap comprises a curved cap wall defining a generally cylindrical cavity for receiving the axle such that the axle is rotatably arranged within the curved cap wall.
- 15 25. An outlet valve as claimed in claim 24 wherein the second seal is arranged around the circumference of the axle between the curved cap wall and the axle, at an axial position between the intake opening and a distal end of the curved cap wall.
- 20 26. An outlet valve as claimed in any of claims 18 to 25 wherein the axle is arranged on a valve base for attachment to an outer face of the ostomy appliance, and protrudes from the valve base away from the outer face of ostomy appliance in use.
- 25 27. An outlet valve as claimed in any of claims 18 to 26 wherein a third, circumferential seal is arranged between the valve base and the cap at an axial position between a proximal end of the cap and the valve opening.
- 30 28. An outlet valve as claimed in any preceding claim wherein an axis of rotation of the outlet element defined by the axle is perpendicular to the elongate axis of the outlet tube and optionally wherein the axis of rotation is perpendicular to the body of the ostomate in use.
- 35 29. An outlet valve for an ostomy appliance comprising:
an axle defining a hollow bore for receiving a liquid output from the ostomy appliance, the axle comprising a curved lateral wall and an axle end wall arranged across the hollow bore; and
an outlet element comprising a cap arranged concentrically with the axle and an outlet tube affixed to the cap; wherein:
a valve opening is defined in a portion of the axle end wall; and

the cap is rotatable around the axle to move the outlet element from a closed configuration in which the valve opening is not in liquid communication with the outlet tube to an open configuration in which the valve opening is in liquid communication with the outlet tube.

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30. An outlet valve as claimed in claim 29 wherein the cap comprises an inner cap end portion arranged to overlie the axle end wall and the inner cap end portion comprises an intake opening being arranged to be rotatable into a position in which the intake opening at least partially aligns with the valve opening such that the outlet element is in the open configuration, wherein, the intake opening has an arcuate shape aligned with a circumference around the axis of rotation of the cap.
31. An outlet valve as claimed in claim 29 or 30 wherein the cap comprises an inner cap end portion arranged to overlie the axle end wall and the inner cap end portion comprises an intake opening being arranged to be rotatable into a position in which the intake opening at least partially aligns with the valve opening such that the outlet element is in the open configuration, wherein a gasket seal is arranged around a periphery of the valve opening to seal between the axle end wall and a portion of the cap around the periphery of the valve opening, and wherein the intake opening comprises a protrusion provided across at least a part of the intake opening.
32. An outlet valve as claimed in claim 31 wherein the protrusion is configured to at least partially compress the gasket seal while the gasket seal is adjacent to the intake opening.
33. An outlet valve as claimed in any of claims 29 to 32 wherein an outer surface of the curved lateral wall comprises a circumferential protrusion around a circumference of the axle, and the cap comprises a retaining tooth configured to engage with the circumferential protrusion to prevent axial movement of the cap relative to the axle during rotation.
34. An outlet valve as claimed in claim 33 wherein the retaining tooth is provided adjacent to the outlet tube.

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- 5 35. An outlet valve as claimed in any of claims 29 to 34 wherein the cap comprises an inner wall arranged concentrically around the curved lateral wall of the axle, and an outer wall arranged concentrically around the inner wall such that a flow space is defined between the inner wall and the outer wall, the flow space being in liquid communication with the outlet tube.
36. An outlet valve as claimed in any of claims 29 to 35 wherein the axle end wall is generally planar.
- 10 37. An outlet valve as claimed in any of claims 29 to 36 wherein the axle is arranged on a valve base for attachment to an outer face of the ostomy appliance, and protrudes from the valve base away from the outer face of ostomy appliance in use.
- 15 38. An outlet valve as claimed in any of claims 29 to 37 wherein a gasket seal is arranged around a periphery of the valve opening to seal between the axle end wall and a portion of the cap around the periphery of the valve opening.
- 20 39. An outlet valve as claimed in any of claims 29 to 38 wherein the cap comprises an inner wall, the inner wall comprising:
a generally cylindrical inner side wall portion; and
in inner cap end portion;
wherein the inner side wall portion defines a generally cylindrical cavity for receiving the axle such that the axle is rotatably arranged within the inner wall; and
the inner cap end portion is arranged across the generally cylindrical cavity such
25 that it overlies the axle end wall.
40. An outlet valve as claimed in claim 39 wherein a gasket seal is arranged on the axle end wall around a periphery of the valve opening to seal between the axle end wall and a planar face of the inner cap end portion.
- 30 41. An outlet valve as claimed in claim 39 or claim 40 wherein an intake opening is provided in the inner cap end portion, the intake opening being arranged to be rotatable into a position in which the intake opening at least partially aligns with the valve opening, such that the outlet element is in the open configuration.
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- 5 42. An outlet valve as claimed in claim 41 wherein the outlet element is rotatable from a fully open position in which the intake opening is fully aligned with the valve opening to a fully closed position in which the valve opening is obstructed by the inner cap end portion such that no liquid may pass from the hollow bore of the axle to the flow space through the valve opening.
43. An outlet valve as claimed in any one of claims 39 to 42 wherein the inner cap end portion is generally planar.
- 10 44. An outlet valve as claimed in any one of claims 39 to 43 wherein the cap further comprises an outer wall arranged concentrically around the inner wall such that a flow space is defined between the inner wall and the outer wall, the flow space being in liquid communication with the outlet tube.
- 15 45. An outlet valve as claimed in claim 44 wherein the outer wall comprises an outer side wall portion and an outer cap end portion, wherein the outer cap end portion overlies the inner cap end portion and is axially spaced from the inner cap end portion such that at least a portion of the flow space is arranged between the outer cap end portion and the inner cap end portion.
- 20 46. An outlet valve as claimed in any one of claims 39 to 45 wherein an axis of rotation of the outlet element defined by the axle is perpendicular to the elongate axis of the outlet tube and optionally wherein the axis of rotation is perpendicular to the body of the ostomate in use.
- 25 47. An outlet valve as claimed in claim 46 wherein the axle end wall is arranged transverse to the axis of rotation, and optionally perpendicular to the axis of rotation defined by the axle.
- 30 48. An ostomy appliance comprising:
an outlet valve as claimed in any preceding claim; and
an ostomy bag
wherein the outlet valve is attached to an outer face of the ostomy bag.
- 35 49. An ostomy appliance as claimed in any preceding claim wherein:

in the closed configuration the outlet element substantially overlies a cavity of the ostomy bag; and
in the open configuration at least a portion of the outlet element extends across a lower edge of the cavity of the ostomy bag.