

What is Claimed:

1. A breast pump tubing system comprising:
 - a suction tubing and a milk tubing, wherein the suction tubing and milk tubing each have first and second ends, and wherein the suction and milk tubing are adhered together in a side-by-side manner;
 - a first connector, having a first portion for fluid coupling to both a breast pump and the first end of the suction tubing, and a second portion for fluid coupling to both a milk bottle and the first end of the milk tubing; and
 - a second connector, having a first portion for fluid coupling to both a suction port of a breast shield and the second end of the suction tubing, and a second portion for fluid coupling to both a breast milk collecting port of the breast shield and the second end of the milk tubing.
2. The breast pump tubing system of claim 1, wherein the first connector is configured to fluidly couple to the breast pump through a suction filter comprising two suction paths to minimize contamination.
3. The breast pump tubing of claim 1, wherein the second connector comprises one or more vent holes in the first portion for controlling suction and a diaphragm.
4. The breast pump tubing of claim 1, wherein the first portion of the first connector is removably coupled to the breast pump, and the second portion of the first connector is removably coupled to the milk bottle.
5. The breast pump tubing of claim 1, wherein the first portion of the second connector is removably coupled to the suction port of the breast shield and the second portion of the second connector is removably coupled to the breast milk collecting port.

6. A breast shield system comprising:
- a diaphragm having a milk collection port and an outer lip;
 - a cover portion having an edge, a suction port and an interface, wherein the edge of the cover sealingly couples to the lip of the diaphragm.

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7. The breast shield system of claim 6, wherein the cover portion has a profile sized and shaped to resemble a breast.

8. The breast shield system of claim 6, further comprising a bra pad conforming in shape to the shield system, wherein the bra pad can be inserted into a bra to secure and hide the breast shield system.

9. The breast shield system of claim 6, wherein the suction port is configured for fluid coupling to a suction portion of a connector, and wherein the milk collecting port is configured for fluid coupling to a milk collection portion of a connector; and wherein the suction portion and milk collection portions of the connector are separated from one another.

10. The breast shield system of claim 6, wherein the suction port is configured for removably coupling to a suction portion of a connector, and wherein the milk collecting port is configured for removably coupling to a milk collection portion of a connector; and wherein the suction portion of the connector is further coupled to a suction tubing, and wherein the milk collection portion of the connector is further coupled to a milk tubing.

11. The breast shield system of claim 6, wherein the diaphragm is configured to receive suction from the suction tubing and expand towards the cover, thereby generating suction at a user's nipple.

12. The breast shield system of claim 6, wherein the flexible diaphragm is configured to receive suction from the suction tubing and expand towards the cover, thereby generating suction at a user's nipple and further isolating a wet side of the breast shield from a dry side of the breast shield.

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13. The breast shield system of claim 6, wherein the flexible diaphragm is configured to receive suction from the suction tubing and expand towards the cover, and wherein the diaphragm is configured to collapse towards the user's nipple when the air pressure on a wet side of the breast shield is lower than the pressure on a dry side of the breast shield.

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14. The breast shield system of claim 13, further comprising an equalization check valve to relieve excess pressure on the wet side by allowing venting to ambient air outside the breast shield.

15. The breast shield system of claim 13, further comprising an equalization check valve to relieve excess pressure on the wet side by allowing venting to the dry side of the breast shield.

16. A filter cartridge system comprising:

a first internal suction path;

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a second internal suction path;

a first set of vent holes that couple to the first internal suction path;

a second set of vent holes that couple to the second internal suction path; and

a first filter element to minimize bacteria from passing through the first internal suction path;

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a second filter element to minimize liquid ingress into the second internal suction path.

17. The filter cartridge system of claim 16, further comprising a first open alignment position in which the first set of vent holes is aligned with the first internal suction path and the second set of vent holes is aligned with the second internal suction path.
- 5 18. The filter cartridge system of claim 16, further comprising a second semi-closed alignment position in which the first set of vent holes is aligned with the first internal suction path and the second set of vent holes is out of alignment with the second internal suction path.
- 10 19. The filter cartridge system of claim 16, further comprising a third closed alignment position in which the first set of vent holes is out of alignment with the first internal suction path and the second set of vent holes is out of alignment with the second internal suction path.
20. The filter cartridge system of claim 16, wherein the cartridge is further configured to couple to a breast pump system.