CLAIMS

1. A fluid dispenser assembly comprising:

a docking console including a cartridge support surface having a first end and a second end; and

a manifold having one or more wells defined therein;

wherein the docking console comprises:

a manifold retention bracket to releasably hold the manifold against a fluid cartridge supported on the cartridge support surface at an interface position such that the one or more wells are in fluid communication with the fluid cartridge; and

a biased seal bar to press the fluid cartridge against the manifold held by the manifold retention bracket;

wherein the seal bar is received in a transverse recess formed in the cartridge support surface and moves within the recess, and the docking console comprises one or more compression springs disposed in the recess between a bottom of the recess and the seal bar and biased against a bottom surface of the seal bar.

2. The fluid dispenser assembly of claim 1, wherein the docking console comprises a rim wall projecting proximate the first end of the cartridge support surface, wherein the rim wall defines a cavity along the cartridge support surface such that the cavity conforms to the shape of at least a portion of the fluid cartridge.

3. The fluid dispenser assembly of claim 2, wherein the rim wall comprises one or more tabs to engage a portion of the fluid cartridge disposed within the cavity.

4. The fluid dispenser assembly of claim 1, wherein the manifold retention bracket comprises:

a pair of sidewalls extending along opposite sides of the cartridge support surface adjacent to the second end; and

a clamp arm secured to the pair of sidewalls for pivoting movement between a release position and a locking position.

5. The fluid dispenser assembly of claim 4, wherein the manifold comprises a first arm projecting from a first end of the manifold and a second arm projecting from a second end of the manifold and having a different configuration than the first arm, and wherein each sidewall comprises a recess to receive one of the first arm or the second arm such that the manifold is held by the sidewalls in a single orientation.

6. The fluid dispenser assembly of claim 4, wherein the manifold retention element further comprises a locking mechanism to releasably secure the clamp arm in the locking position.

7. The fluid dispenser assembly of claim 6, wherein the locking mechanism comprises a magnet to magnetically couple the clamp arm to at least one of the sidewalls when the clamp arm is in the locking position.

8. The fluid dispenser assembly of claim 4, wherein the clamp arm comprises one or more contact elements to provide contact pressure against a top surface of the manifold when the manifold is held by the manifold retention bracket and the clamp arm is in the locking position.

9. The fluid dispenser assembly of claim 1, wherein the docking console comprises a positioning device to bias the fluid cartridge or a component thereof into the interface position.

10. The fluid dispenser assembly of claim 9, wherein the positioning device comprises one or more resilient prongs projecting from the cartridge support surface and disposed adjacent to the first end of the cartridge support surface, and each resilient prong extends through a slot formed in the fluid cartridge.

11. A fluid dispenser assembly comprising:

a docking console including a cartridge support surface having a first end and a second end; and

a manifold having one or more wells defined therein, wherein each one of the wells comprises a retainer chamber and an outlet aperture disposed below and in communication with the retainer chamber; and

a hydrophilic porous frit disposed within at least one of the wells and is to permit liquid to flow through the outlet aperture but prevent gas from passing through the outlet aperture;

wherein the docking console comprises:

a manifold retention bracket to releasably hold the manifold against a fluid cartridge supported on the cartridge support surface at an interface position such that the one or more wells are in fluid communication with the fluid cartridge; and a biased seal bar to press the fluid cartridge against the manifold held by the manifold retention bracket;

wherein the seal bar is received in a transverse recess formed in the cartridge support surface and for restricted movement within the recess, and the docking console comprises one or more

compression springs disposed in the recess between a bottom of the recess and the seal bar and biased against a bottom surface of the seal bar.

12. The fluid dispenser assembly of claim 11, wherein the hydrophilic porous frit comprises molded polyethylene coated with a surfactant.

13. The fluid dispenser assembly of claim 11, wherein the pores of the hydrophilic porous frit comprises a pore size in the range of about 15 μm to about 160 μm.

14. The fluid dispenser assembly of claim 11, wherein the docking console comprises a positioning device to bias the fluid cartridge or a component thereof into the interface position.

15. The fluid dispenser assembly of claim 14, wherein the positioning device comprises one or more resilient prongs projecting from the cartridge support surface and disposed adjacent to the first end of the cartridge support surface, and each resilient prong is to extend through a slot formed in the fluid cartridge.

16. A method for dispensing fluid into a fluid cartridge comprising:

placing the fluid cartridge on a cartridge support surface of a docking console such that a positioning device of the docking console engages the fluid cartridge and biases the fluid cartridge or the component thereof into an interface position;

placing a manifold having one or more wells defined therein on a manifold retention bracket of the docking console;

placing a biased seal bar on the docking console to press the fluid cartridge against the manifold held by the manifold retention bracket; wherein the seal bar is received in a transverse recess formed in the cartridge support surface and moves within the recess, and the docking console comprises one or more compression springs disposed in the recess between a bottom of the recess and the seal bar and biased against a bottom surface of the seal bar;

moving the manifold retention bracket from a release position to a locking position with respect to hold the manifold against the fluid cartridge such that the one or more wells are in fluid communication with the fluid cartridge;

dispensing fluid into the one or more wells of the manifold such that the fluid is dispersed into the fluid cartridge;

moving the manifold retention bracket from the locking position to the release position; and

removing the manifold and the fluid cartridge from the docking console.