CLAIMS

1. A toner cartridge for an electrophotographic image forming device, comprising:

a housing having a top, a bottom, a front, and a rear positioned between a first side and a second side of the housing, the housing having a reservoir for storing toner;

an outlet port in fluid communication with the reservoir and positioned on the front of the housing near the first side of the housing for exiting toner from the toner cartridge;

an interface gear exposed on the front of the housing near the top of the second side of the housing for engaging with a corresponding drive gear in the image forming device;

a magnet movable in response to rotation of the interface gear; and

an engagement member positioned on an exterior of the top of the housing proximate the second side of the housing, the engagement member is aligned with a point in a path of movement of the magnet, the engagement member has a front surface that is unobstructed to contact and push a sensor housing in the image forming device supporting a magnetic sensor to an operating position of the magnetic sensor during insertion of the toner cartridge into the image forming device.

2. The toner cartridge of claim 1, wherein the magnet passes in close proximity to an inner surface of the housing forming the reservoir at a location where the engagement member is positioned on the exterior of the housing during rotation of the interface gear.

3. The toner cartridge of claim 1, wherein the engagement member projects upward from the top of the housing.

4. The toner cartridge of claim 1, wherein the front surface of the engagement member includes a pair of front engagement surfaces spaced apart from each other along a side-to-side dimension of the housing and aligned with each other along a front-to-rear dimension of the housing.

5. The toner cartridge of claim 1, wherein the engagement member includes a pair of side engagement surfaces that face each other, the side engagement surfaces are spaced apart from each other along a side-to-side dimension of the housing and are aligned with each other along a front-to-rear dimension of the housing.

6. The toner cartridge of claim 1, further comprising a ramp positioned on the exterior of the housing in front of the engagement member and leading toward the engagement member, a top surface of the ramp inclines upward as the ramp extends toward the engagement member.

7. The toner cartridge of claim 6, further comprising a planar top surface that extends rearward from a rear end of the ramp to the engagement member, the planar top surface is substantially horizontal when the toner cartridge is in its operative orientation.

8. A toner cartridge for an electrophotographic image forming device, comprising:

a housing having a top, a bottom, a front, and a rear positioned between a first side and a second side of the housing, the housing having a reservoir for storing toner;

an outlet port in fluid communication with the reservoir and positioned on the front of the housing near the first side of the housing for exiting toner from the toner cartridge;

an interface gear exposed on the front of the housing near the top of the second side of the housing for engaging with a corresponding drive gear in the image forming device;

a magnet movable in response to rotation of the interface gear; and

a projection on an exterior of the top of the housing proximate the second side of the housing, the projection is aligned with a point in a path of movement of the magnet, the projection has a front surface that is unobstructed to contact and push a sensor housing in the image forming device supporting a magnetic sensor to an operating position of the magnetic sensor during insertion of the toner cartridge into the image forming device.

9. The toner cartridge of claim 8, wherein the magnet passes in close proximity to an inner surface of the housing forming the reservoir at a location where the projection is positioned on the exterior of the housing during rotation of the interface gear.

10. The toner cartridge of claim 8, wherein the front surface of the projection includes a pair of front engagement surfaces spaced apart from each other along a side-to-side dimension of the housing and aligned with each other along a front-to-rear dimension of the housing.

11. The toner cartridge of claim 8, wherein the projection includes a pair of side engagement surfaces that face each other, the side engagement surfaces are spaced apart from each other along a side-to-side dimension of the housing and are aligned with each other along a front-to-rear dimension of the housing.

12. The toner cartridge of claim 8, further comprising a ramp positioned on the exterior of the housing in front of the projection and leading toward the projection, a top surface of the ramp inclines upward as the ramp extends toward the projection.

13. The toner cartridge of claim 12, further comprising a planar top surface that extends rearward from a rear end of the ramp to the projection, the planar top surface is substantially horizontal when the toner cartridge is in its operative orientation.

14. A toner cartridge for an electrophotographic image forming device, comprising:

a housing having a top, a bottom, a front, and a rear positioned between a first side and a second side of the housing, the housing having a reservoir for storing toner;

an outlet port in fluid communication with the reservoir and positioned on the front of the housing near the first side of the housing for exiting toner from the toner cartridge;

a rotatable shaft positioned within the reservoir and having an axis of rotation;

an interface gear operatively connected to the rotatable shaft for providing rotational motion to the rotatable shaft, a portion of the interface gear being exposed on the front of the housing near the top of the second side of the housing and engagable with a corresponding drive gear in the image forming device;

a magnet in the reservoir movable in response to rotation of the shaft; and

a U-shaped projection on an exterior of the top of the housing proximate the second side of the housing, the U-shaped projection is aligned with a point in a path of movement of the magnet in the reservoir, the U-shaped projection includes a pair of front engagement surfaces that are spaced axially apart from each other and aligned with each other along a front-to-rear dimension of the housing, the front engagement surfaces are unobstructed to contact and push a sensor housing in the image forming device supporting a magnetic sensor to an operating position of the magnetic sensor during insertion of the toner cartridge into the image forming device.

15. The toner cartridge of claim 14, wherein the magnet is rotatable around the axis of rotation of the shaft in response to rotation of the shaft.

16. The toner cartridge of claim 14, wherein the U-shaped projection is axially aligned with the magnet relative to the axis of rotation of the shaft.

17. The toner cartridge of claim 14, wherein the magnet passes in close proximity to an inner surface of the housing forming the reservoir at a location where the U-shaped projection is positioned on the exterior of the housing.

18. The toner cartridge of claim 14, wherein the U-shaped projection includes a pair of side engagement surfaces that face each other, the side engagement surfaces are spaced axially apart from each other and aligned with each other along a front-to-rear dimension of the housing.

19. The toner cartridge of claim 14, further comprising a ramp positioned on the exterior of the housing in front of the U-shaped projection and leading toward the U-shaped projection, a top surface of the ramp inclines upward as the ramp extends toward the U-shaped projection.

20. The toner cartridge of claim 19, further comprising a planar top surface that extends rearward from a rear end of the ramp to the U-shaped projection, the planar top surface is substantially horizontal when the toner cartridge is in its operative orientation.