CLAIMS

What is claimed is:

1. An allograft implant for fusing a sacroiliac joint, the allograft implant comprising:

a body having a proximal end, a distal end, and a length disposed therebetween, the distal end having a rounded nose;

two sides, each side comprising a groove beginning at the proximal end of the body and continuing along each of the two sides for at least part of the length, the distance between the two sides defining a width (W) of the body;

two opposing faces, each face having one or more anti-migration features, and each face configured for abutting contact with a sacrum or an ilium of the sacroiliac joint;

a single graft window disposed between each face, the single graft window providing passage through the body between the two opposing faces, wherein a portion of the body located between the single graft window and each of the sides defines a wall, wherein the single graft window is confined to an interior surface of the body whereby the single graft window does not open to the sides, and wherein the single graft window has a cross-sectional area that is:

35% to 40% of a first cross-sectional area of the body;

and

60% of an area of each opposing face that makes contact with the sacrum or the ilium of the sacroiliac joint,

wherein a shortest distance between the interior surface of the body and an innermost surface of the groove defines a minimum wall thickness of the implant.

2. The allograft implant of claim 1, wherein the single graft window is unobstructed by internal or intermediate supports.

3. The allograft implant of claim 1, wherein the single graft window has a proximal portion located in proximity to the grooves, and a distal portion, the proximal portion having a width (W1) that is less than a width (W2) of the distal portion such that the wall maintains a minimum thickness in a range of 17% to 20% of the width (W) of the body.

4. The allograft implant of claim 2, wherein the single graft window has a proximal portion located in proximity to the grooves, and a distal portion, the proximal portion having a width (W1) that is less than a width (W2) of the distal portion such that the wall maintains a minimum thickness in the range of 17% to 20% of the width (W) of the body.

5. The allograft implant of claim 1, wherein the proximal end of the body comprises a taper that reduces a second cross-sectional area of the body.

6. The allograft implant of claim 5, wherein the single graft window is unobstructed by internal or intermediate supports.

7. The allograft implant of claim 5, wherein the single graft window has a proximal portion located in proximity to the grooves, and a distal portion, the proximal portion having a width (W1) that is less than a width (W2) of the distal portion such that the wall maintains a minimum thickness in a range of 17% to 20% of the width (W) of the body.

8. The allograft implant of claim 7, wherein the single graft window has a proximal portion located in proximity to the grooves, and a distal portion, the proximal portion having a width (W1) that is less than a width (W2) of the distal portion such that the wall maintains a minimum thickness in the range of 17% to 20% of the width (W) of the body.

9. An implant for fusing a sacroiliac joint, the implant comprising:

a body consisting of allograft bone material, the body comprising a proximal end, a distal end, and a length disposed therebetween;

two sides, each side comprising a groove beginning at the proximal end of the body and continuing along each of the two sides for at least part of the length, the distance between the two sides defining a width of the body;

two opposing faces, each face having one or more anti-migration features, and each face configured for abutting contact with a sacrum or an ilium of the sacroiliac joint;

a single graft window disposed between each face, the single graft window providing passage through the body between the two opposing faces, wherein a portion of the body located between the single graft window and each of the sides defines a wall, wherein the single graft window is confined to an interior surface of the body whereby the single graft window does not open to the sides, the single graft window having a proximal portion located in proximity to the grooves, and a distal portion, the proximal portion having a width that is less than a width of the distal portion such that the wall maintains a minimum thickness in a range of 17% to 20% of the width of the body; and

wherein the single graft window has a cross-sectional area that is:

35% to 40% of a first cross-sectional area of the body; and

60% of an area of each opposing face that makes contact with the sacrum or the ilium of the sacroiliac joint,

wherein a shortest distance between the interior surface of the body and an innermost surface of the groove defines a minimum wall thickness of the implant.

10. The implant of claim 9, wherein the single graft window is unobstructed by internal or intermediate supports.

11. An implant for fusing a sacroiliac joint, the implant comprising:

a body comprising a proximal end, a distal end, and a length disposed therebetween;

two sides, each side comprising a groove beginning at the proximal end of the body and continuing along each of the two sides for at least part of the length, the distance between the two sides defining a width of the body;

two opposing faces, each face having one or more anti-migration features, and each face configured for abutting contact with a sacrum or an ilium of the sacroiliac joint;

a single graft window disposed between each face, the single graft window providing passage through the body between the two opposing faces, wherein a portion of the body

located between the single graft window and each of the sides defines a wall, wherein the single graft window is confined to an interior surface of the body whereby the single graft window does not open to the sides, the single graft window having a proximal portion located in proximity to the grooves, and a distal portion, the proximal portion having a width that is less than a width of the distal portion such that the wall maintains a minimum thickness in a range of 17% to 20% of the width of the body,

wherein a shortest distance between the interior surface of the body and an innermost surface of the groove defines a minimum wall thickness of the implant.

12. The implant of claim 11, wherein the single graft window is unobstructed by internal or intermediate supports.