CLAIMS:

1. An upper ring of a plasma confinement ring assembly useful for controlling wafer area pressure in a capacitively coupled plasma reaction chamber wherein a wafer is supported on a lower electrode assembly and process gas is introduced into the chamber by an upper showerhead electrode assembly, wherein:

the upper ring has an upper wall, a lower wall, an outer wall, an inner wall, a series of circumferentially extending slots which pass through the upper and lower walls, a plurality of twist and lock bores in the upper wall adapted to engage with vertically movable plungers mounted in a top wall of the plasma reaction chamber such that the upper ring is supported by the plungers by inserting free ends of the plungers in the twist and lock bores and rotating the ~~plasma confinement~~ upper ring to lock the plungers in narrow ends of the twist and lock bores, a plurality of hanger bores extending between the upper and lower walls, the hanger bores including larger upper and lower sections connected by a smaller diameter central section;

wherein lower sections of each of the hanger bores are configured to locate a respective spacer sleeve therein and a respective inner wall of each of the lower sections of the respective hanger bores are configured to be spaced from the respective spacer sleeves by at least 0.1 inch when the respective spacer sleeves are located in the respective lower sections of each of the hanger bores.

2. A hanger assembly of a plasma confinement ring assembly useful for controlling wafer area pressure in a capacitively coupled plasma reaction chamber wherein a wafer is supported on a lower electrode assembly and process gas is introduced into the chamber by an upper showerhead electrode assembly, comprising:

a hanger cap configured to fit in an upper sections of a hanger bore in an upper ring of the plasma confinement ring assembly, the hanger cap including a stepped bore in a lower wall thereof and a helical spring press fitted in a small diameter upper section of the stepped bore; and

a hanger configured to fit in a lower section of the hanger bore in the upper ring of the plasma confinement ring assembly, the hanger having an upper end configured to fit in the stepped bore of the hanger cap such that the helical spring is compressed, the

hanger being movable vertically with respect to the hanger cap and rotatable to a lock position, the hanger including at least one projection adapted to rotate in the stepped bore of the hanger cap to engage a seat in the hanger cap, and the hanger including a lower section having an enlarged lower end;

wherein the hanger includes a spindle section having an axial length of about 1.6 inch and diameter of about 0.4 inch, a flange at a lower end of the spindle section with an axial length of about 0.15 inch, an upper spindle section with an axial length of about 0.2 inch and diameter of about 0.13 inch, an upper triangular section below the upper spindle section with an axial length of about 0.11 inch and maximum width of about 0.39 inch, a lower triangular section below the upper triangular section with an axial length of about 0.145 inch and maximum width of about 0.3 inch.

3. The hanger assembly of claim 2, further comprising:

a spacer sleeve which includes an upper wall, a lower wall, an outer wall, an inner wall and a through hole extending between the upper and lower walls, the spacer sleeve configured to fit in the lower section of the hanger bore with the hanger extending through the through hole.

4. The hanger assembly of claim 2, wherein the hanger includes a projection configured to fit within the lower section of the hanger bore and during upward movement of the hanger the projection does not contact surfaces of the hanger bore until an upper surface of the projection comes into contact with a horizontal surface of the hanger bore.

~~5. A lower ring of a plasma confinement ring assembly useful for controlling wafer area pressure in a capacitively coupled plasma reaction chamber wherein a wafer is supported on a lower electrode assembly and process gas is introduced into the chamber by an upper showerhead electrode assembly, wherein:~~

~~the lower ring has an upper wall, a lower wall, an outer wall, an inner wall and a plurality of through bores extending through the upper and lower walls, the through bores sized to receive hangers of the plasma confinement ring assembly with enlarged heads on the bottoms of the hangers below the lower wall of the lower ring, the lower~~

ring having inner and outer diameters equal to inner and outer diameters of an upper ring of the plasma confinement ring and the lower ring having a uniform thickness of about 0.090 inch.

6. A middle ring of a plasma confinement ring assembly useful for controlling wafer area pressure in a capacitively coupled plasma reaction chamber wherein a wafer is supported on a lower electrode assembly and process gas is introduced into the chamber by an upper showerhead electrode assembly, wherein:

the middle ring has a thickness of about 0.27 inch, an inner diameter of about 17 inches and an outer diameter of about 20 inches, three hanger receiving keyhole shaped holes each of which has a diameter of about 0.42 inch located on a radius of about 8.5 inches and a slot extending radially inward therefrom with a width of about 0.175 inch, three seats in a lower surface of the middle ring each of which extends radially outward from each of the keyhole shaped holes, each of the seats having a width of about 0.23 inch and depth of about 0.15 to 0.2 inch, a heat choke comprising thirty six inner slots and thirty six outer slots, the inner slots being located on a radius of about 8.8 inches and the outer slots being located on a radius of about 9 inches, each of the slots extending circumferentially about 16.5° with ends of the slots spaced about 3.5° apart, and at least one end of each slot terminating in a circular hole having a radius of about 0.015 inch.