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- (54) Title:** CARBON DIOXIDE REFRIGERANT VAPOR COMPRESSION SYSTEM

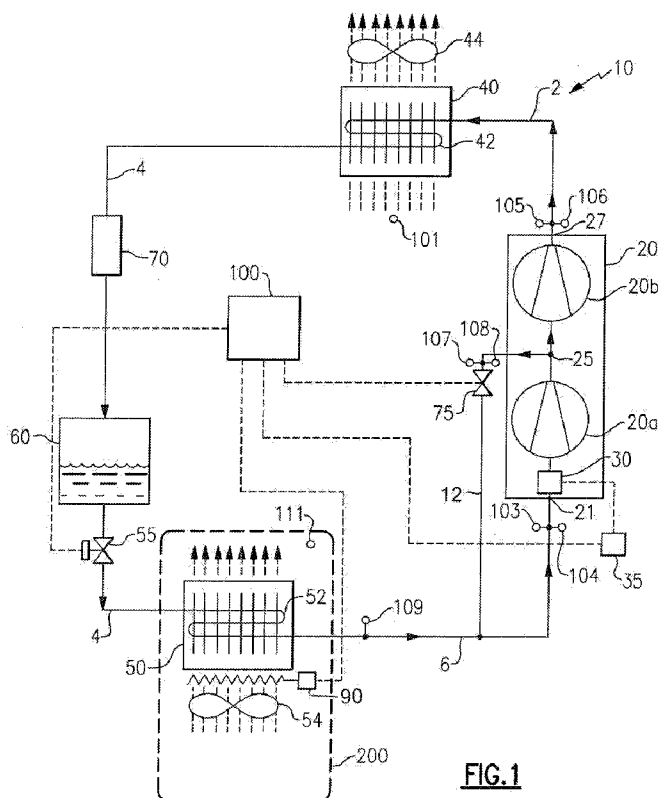


FIG. 1

- (57) Abstract:** A carbon dioxide refrigerant vapor compression system and method of operating that system are provided. The refrigerant vapor compression system includes a compression device, a flash tank receiver disposed in the refrigerant circuit intermediate a refrigerant heat rejection heat exchanger and a refrigerant heat absorption heat exchanger, and a compressor unload circuit including a refrigerant line establishing refrigerant flow communication between an intermediate pressure stage of the compression device and the refrigerant circuit at a location downstream of the refrigerant heat absorption heat exchanger and upstream of a suction inlet to the compression device, and a unload circuit flow control device disposed in said unload circuit refrigerant line. In response to at least one system operating parameter sensed by at least one sensor, the controller selectively positions the unload flow control device to maintain the refrigerant vapor compression system operating below a preselected high pressure limit.



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