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### (54) Air conditioning systems

(57) -An air conditioning system 100 may include a compressor 101 having a driving chamber 110, a cooling circuit 151, a heating circuit 152 and capacity controllers 301, 401. The compressor 101 may have a suction port 115, a discharge port 120, a driving unit 130 provided within the driving chamber 110. The driving unit 130 decreases compressor output discharge capacity when pressure within the driving chamber 110 increases. The first capacity controller 301 and the second capacity controller 401 are provided in parallel. Each capacity controller may communicate the discharge port 120 with the driving chamber 110 respectively. This system may release high-pressure refrigerant from the discharge port 120 into the driving chamber 110 when compressor suction pressure results predetermined low-pressure state during operation of the cooling circuit. As the result, the heat exchanger in the cooling circuit 151 is prevented from being frosted. Further, the system may release high pressure refrigerant from the discharge port 120 into the driving chamber 110 when compressor discharge pressure results predetermined high-pressure state during operation of the heating circuit. As the result, the heating circuit 152 is prevented from being damaged by an abnormally high discharge pressure.

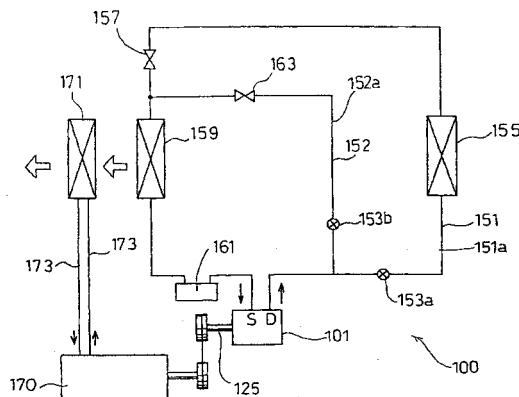


FIG. 2



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## EUROPEAN SEARCH REPORT

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ANNEX TO THE EUROPEAN SEARCH REPORT  
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