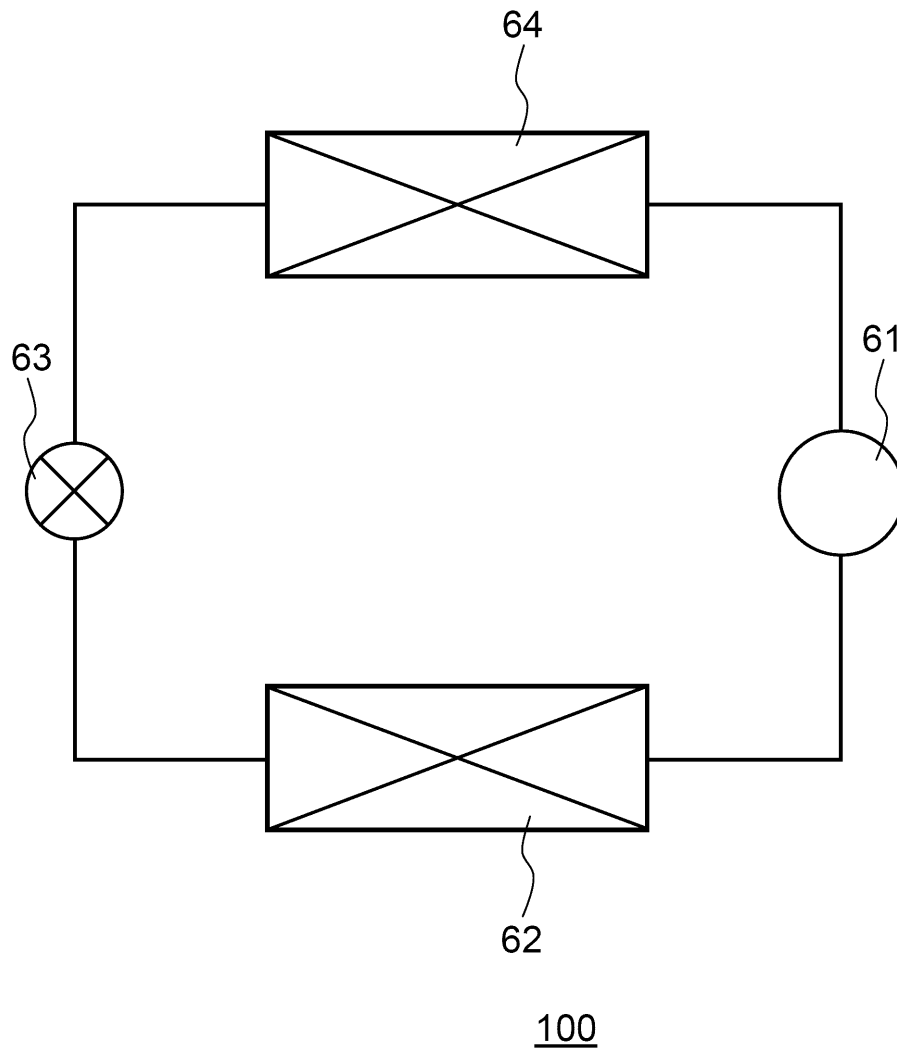


*FIG. 1*



*FIG. 2*

| REFRIGERANT                  |     | R410A | R32/R1123<br>60/40 | R32/R1123<br>50/50 | R32/R1123<br>40/60 | R32/R1123<br>30/70 | R1123 |
|------------------------------|-----|-------|--------------------|--------------------|--------------------|--------------------|-------|
| GWP                          | -   | 2090  | 410                | 350                | 280                | 210                | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.73  | 3.17               | 3.23               | 3.28               | 3.33               | 3.44  |
| EVAPORATION<br>PRESSURE      | MPa | 1.25  | 1.48               | 1.51               | 1.55               | 1.59               | 1.70  |
| DISCHARGE<br>TEMPERATURE     | °C  | 62    | 69                 | 68                 | 67                 | 66                 | 65    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 118%               | 119%               | 120%               | 121%               | 125%  |
| COP                          | %   | 100%  | 97%                | 96%                | 95%                | 94%                | 91%   |

*FIG. 3*

| REFRIGERANT                  |     | R410A | R32/R1123<br>60/40 | R32/R1123<br>50/50 | R32/R1123<br>40/60 | R32/R1123<br>30/70 | R1123 |
|------------------------------|-----|-------|--------------------|--------------------|--------------------|--------------------|-------|
| GWP                          | -   | 2090  | 410                | 350                | 280                | 210                | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.30  | 2.69               | 2.75               | 2.79               | 2.84               | 2.95  |
| EVAPORATION<br>PRESSURE      | MPa | 0.87  | 0.96               | 0.99               | 1.01               | 1.03               | 1.14  |
| DISCHARGE<br>TEMPERATURE     | °C  | 56    | 65                 | 64                 | 63                 | 62                 | 60    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 118%               | 119%               | 120%               | 121%               | 125%  |
| COP                          | %   | 100%  | 97%                | 96%                | 95%                | 94%                | 91%   |

**FIG. 4**

| REFRIGERANT                  |     | R410A | R125/1123<br>60/40 | R125/1123<br>50/50 | R125/1123<br>40/60 | R125/1123<br>30/70 | R1123 |
|------------------------------|-----|-------|--------------------|--------------------|--------------------|--------------------|-------|
| GWP                          |     | 2090  | 2100               | 1760               | 1410               | 1060               | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.73  | 2.73               | 2.85               | 2.97               | 3.09               | 3.44  |
| EVAPORATION<br>PRESSURE      | MPa | 1.25  | 1.29               | 1.36               | 1.43               | 1.50               | 1.70  |
| DISCHARGE<br>TEMPERATURE     | °C  | 62    | 60                 | 61                 | 62                 | 63                 | 65    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 96%                | 101%               | 105%               | 110%               | 125%  |
| COP                          | %   | 100%  | 95%                | 94%                | 93%                | 93%                | 91%   |

**FIG. 5**

| REFRIGERANT                  |     | R410A | R125/1123<br>60/40 | R125/1123<br>50/50 | R125/1123<br>40/60 | R125/1123<br>30/70 | R1123 |
|------------------------------|-----|-------|--------------------|--------------------|--------------------|--------------------|-------|
| GWP                          |     | 2090  | 2100               | 1760               | 1410               | 1060               | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.30  | 2.33               | 2.43               | 2.53               | 2.64               | 2.95  |
| EVAPORATION<br>PRESSURE      | MPa | 0.85  | 0.86               | 0.91               | 0.95               | 1.00               | 1.14  |
| DISCHARGE<br>TEMPERATURE     | °C  | 56    | 58                 | 58                 | 58                 | 59                 | 60    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 96%                | 101%               | 106%               | 111%               | 125%  |
| COP                          | %   | 100%  | 96%                | 95%                | 94%                | 93%                | 91%   |

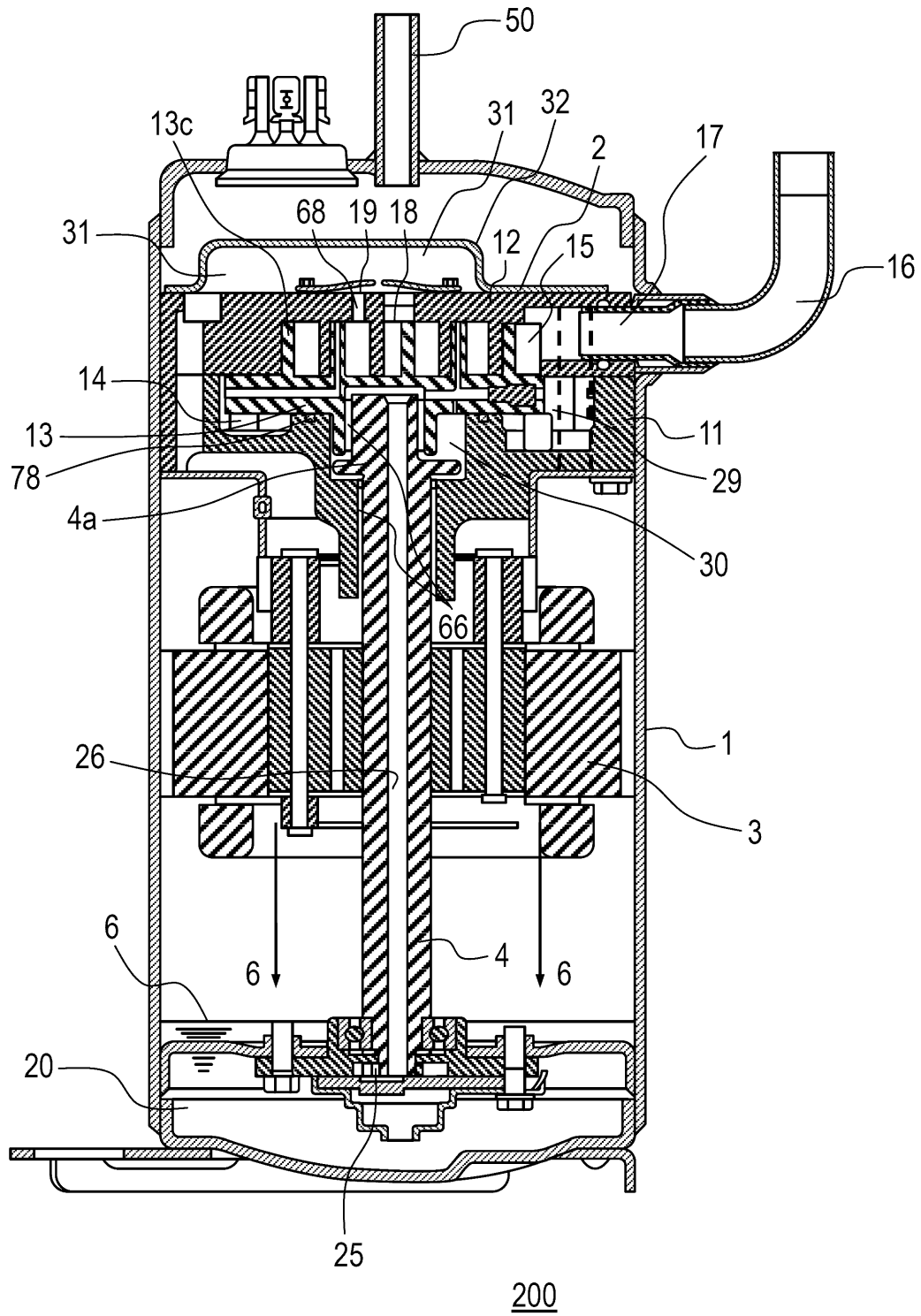
**FIG. 6**

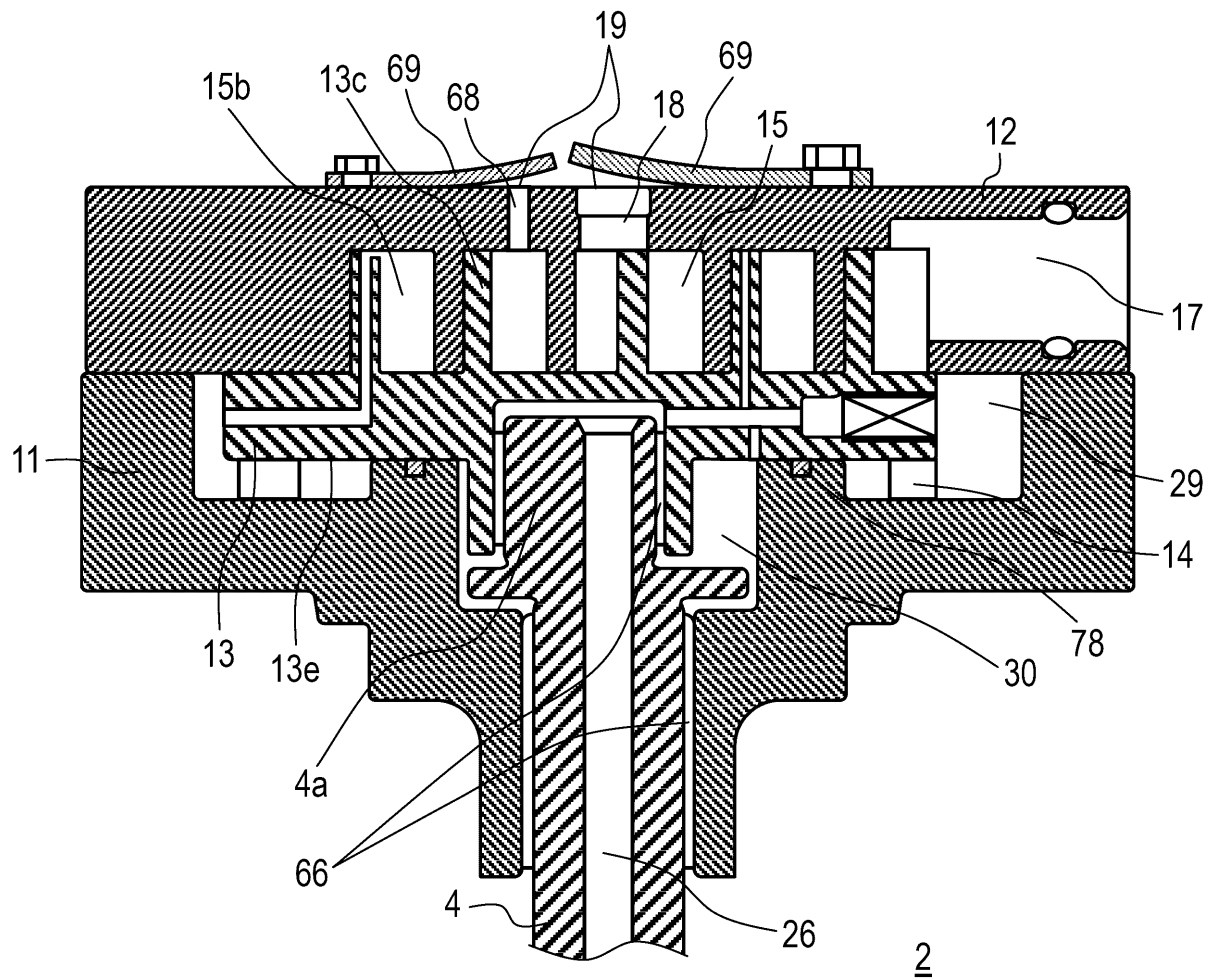
| REFRIGERANT                  |     | R410A | R32/R125/<br>R1123<br>30/30/40 | R32/R125/<br>R1123<br>25/25/50 | R32/R125/<br>R1123<br>20/20/60 | R32/R125/<br>R1123<br>15/15/70 | R1123 |
|------------------------------|-----|-------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------|
| GWP                          |     | 2090  | 1260                           | 1050                           | 840                            | 630                            | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.73  | 2.69                           | 2.68                           | 2.67                           | 2.66                           | 2.62  |
| EVAPORATION<br>PRESSURE      | MPa | 1.25  | 1.24                           | 1.23                           | 1.23                           | 1.22                           | 1.21  |
| DISCHARGE<br>TEMPERATURE     | °C  | 62    | 63                             | 64                             | 64                             | 65                             | 65    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 107%                           | 110%                           | 113%                           | 116%                           | 125%  |
| COP                          | %   | 100%  | 96%                            | 95%                            | 94%                            | 93%                            | 91%   |

**FIG. 7**

| REFRIGERANT                  |     | R410A | R32/R125/<br>R1123<br>30/30/40 | R32/R125/<br>R1123<br>25/25/50 | R32/R125/<br>R1123<br>20/20/60 | R32/R125/<br>R1123<br>15/15/70 | R1123 |
|------------------------------|-----|-------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------|
| GWP                          |     | 2090  | 1260                           | 1050                           | 840                            | 630                            | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.30  | 2.27                           | 2.27                           | 2.26                           | 2.25                           | 2.21  |
| EVAPORATION<br>PRESSURE      | MPa | 0.85  | 0.84                           | 0.84                           | 0.83                           | 0.83                           | 0.82  |
| DISCHARGE<br>TEMPERATURE     | °C  | 56    | 58                             | 58                             | 59                             | 59                             | 60    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 107%                           | 110%                           | 113%                           | 116%                           | 125%  |
| COP                          | %   | 100%  | 96%                            | 96%                            | 95%                            | 94%                            | 91%   |

**FIG. 8**



*FIG. 9*

**FIG. 10**

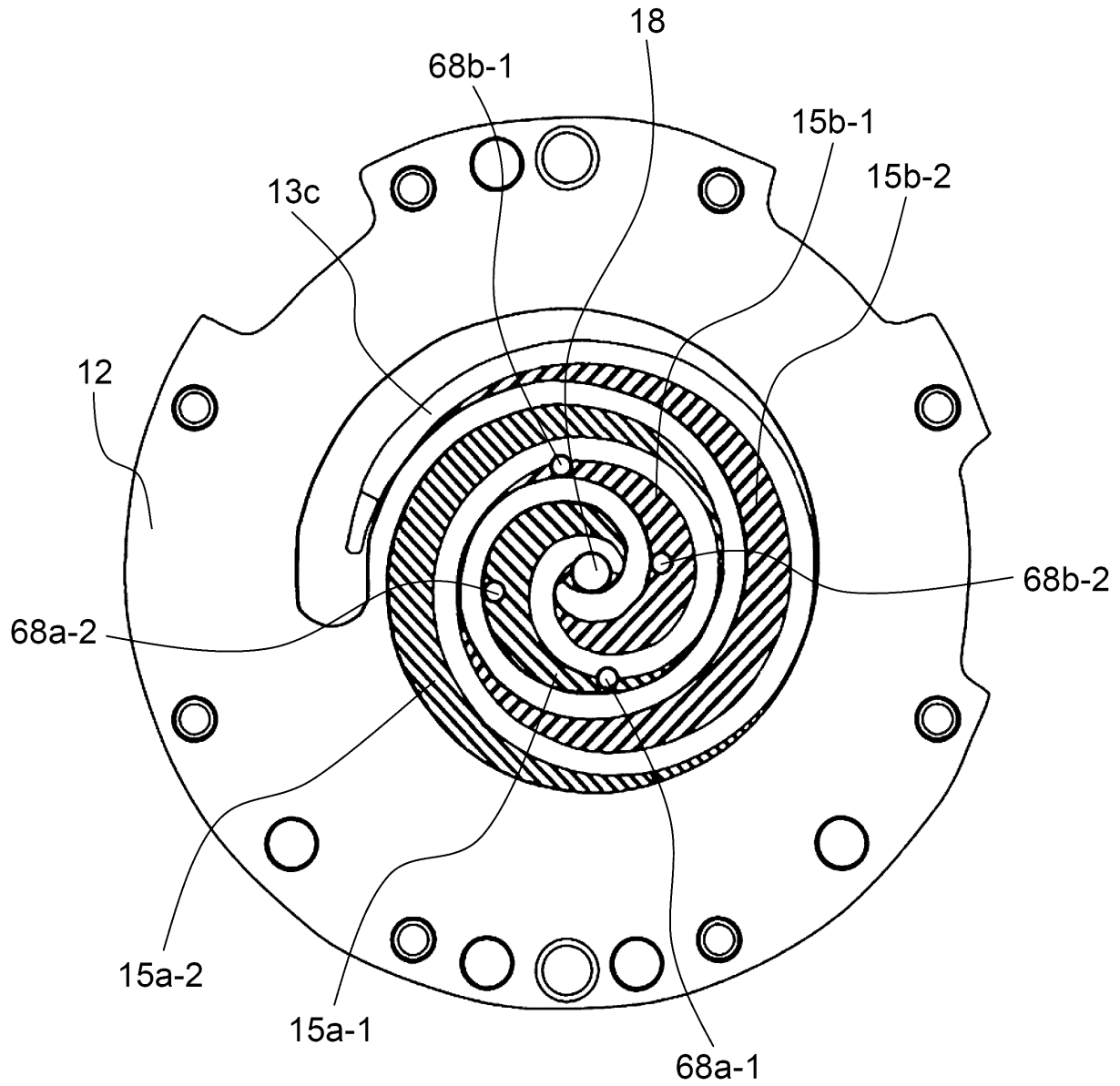


FIG. 11

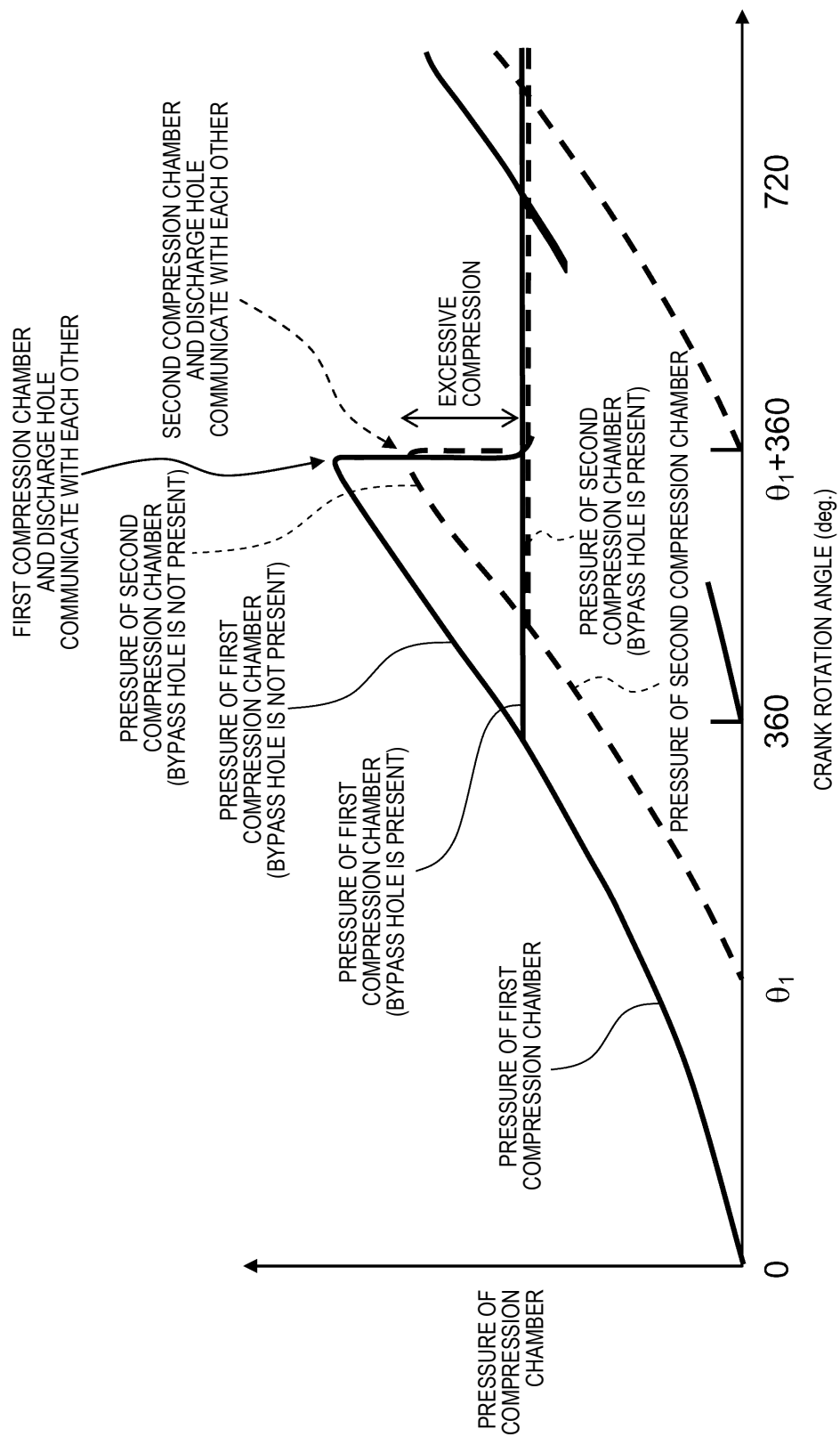
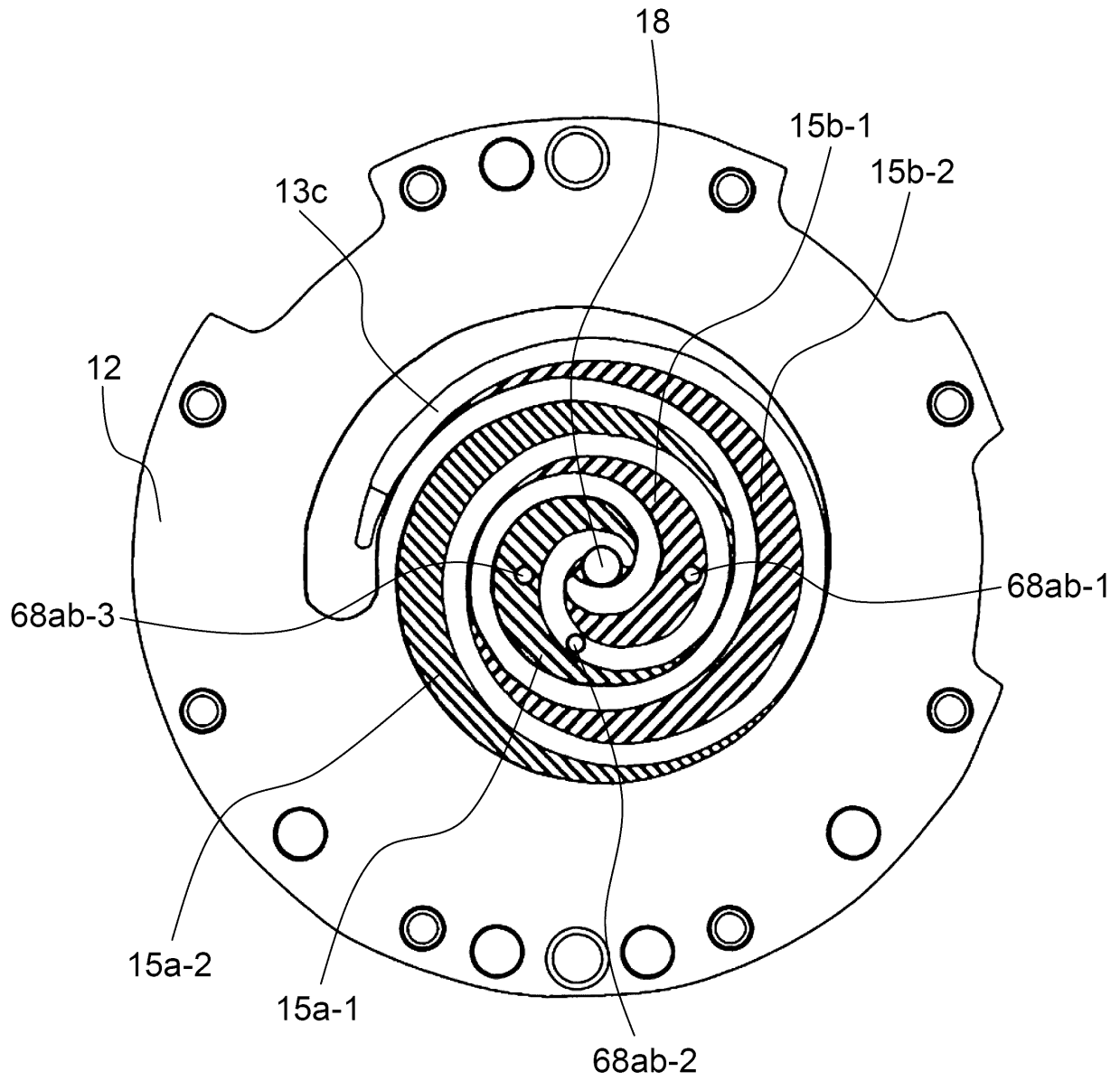
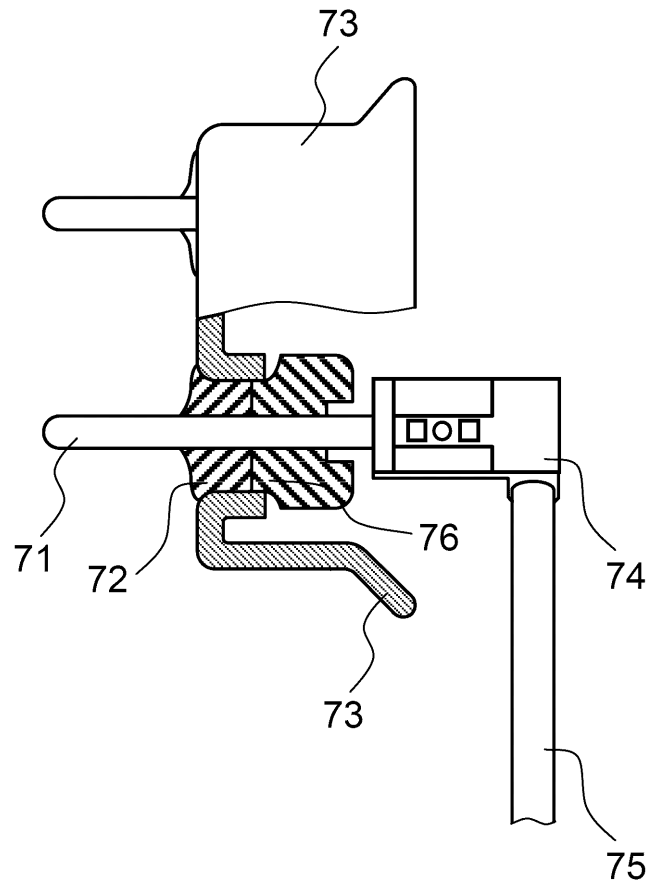
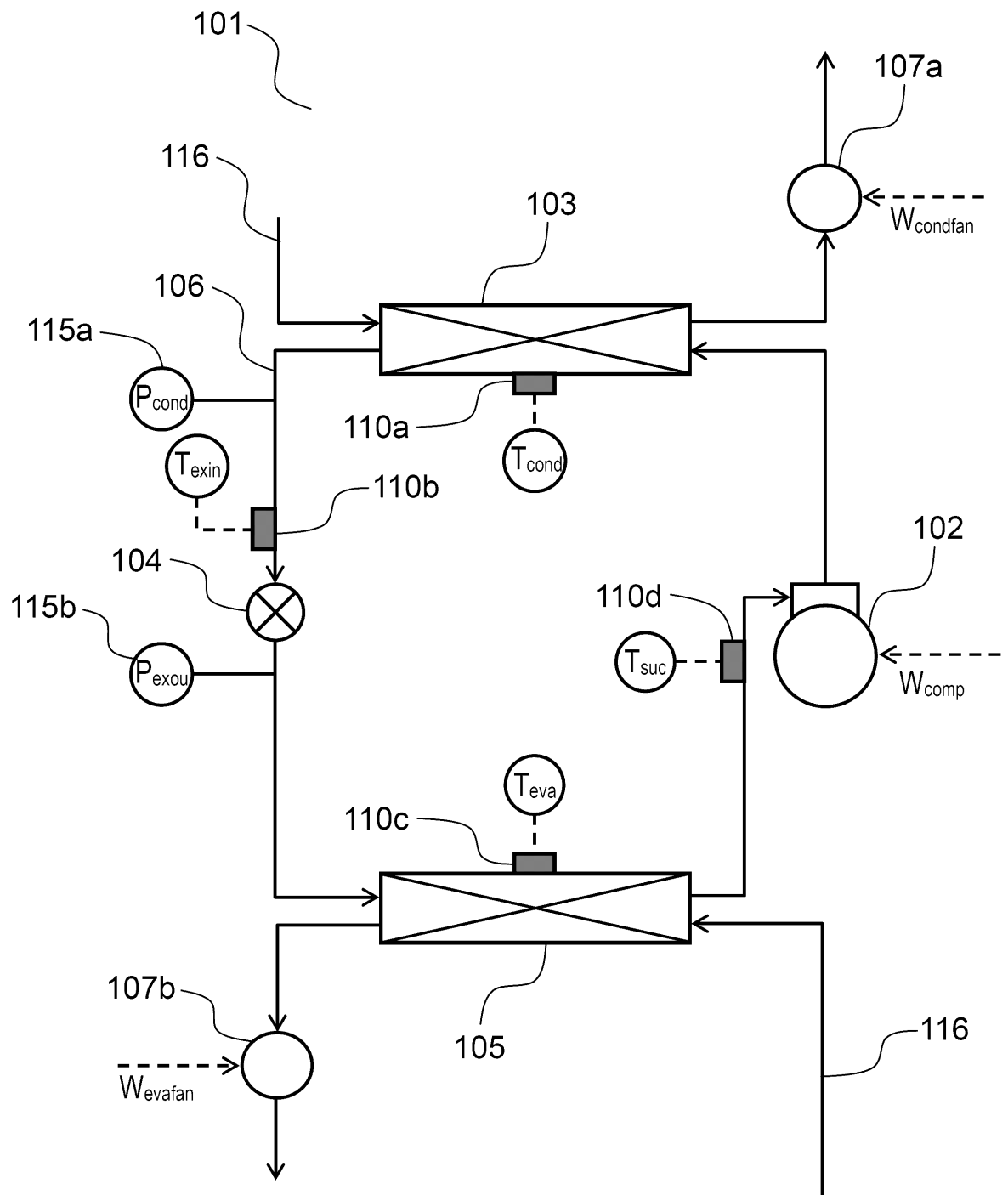


FIG. 12



**FIG. 13**

**FIG. 14**

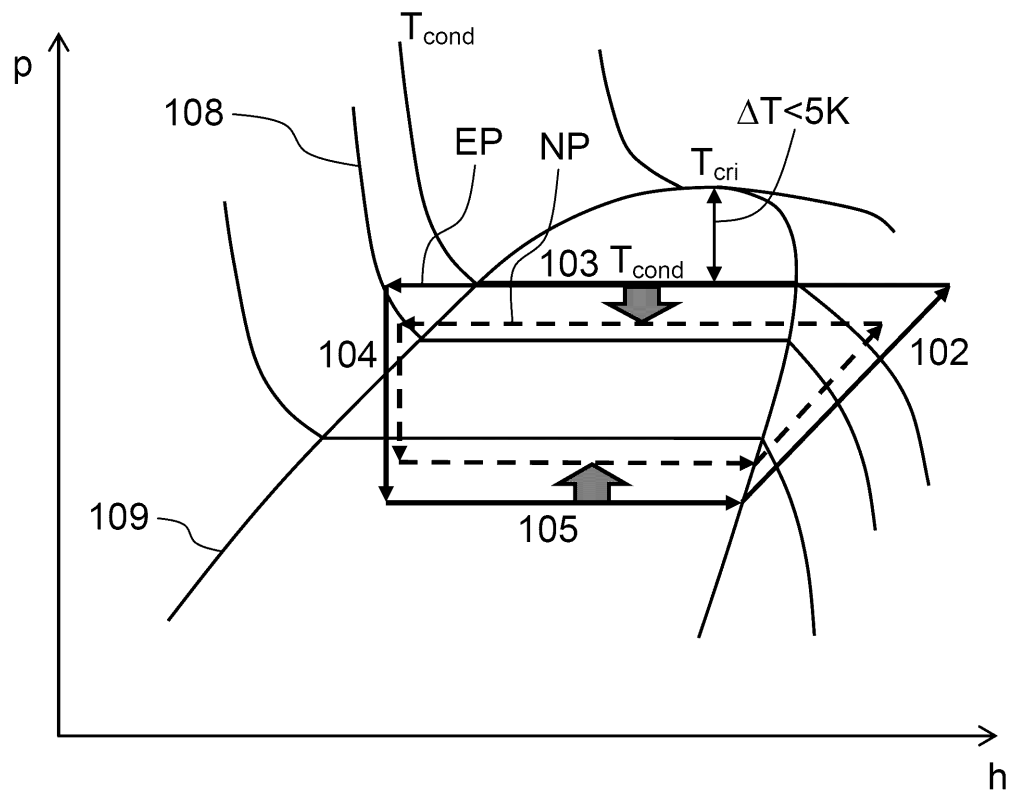
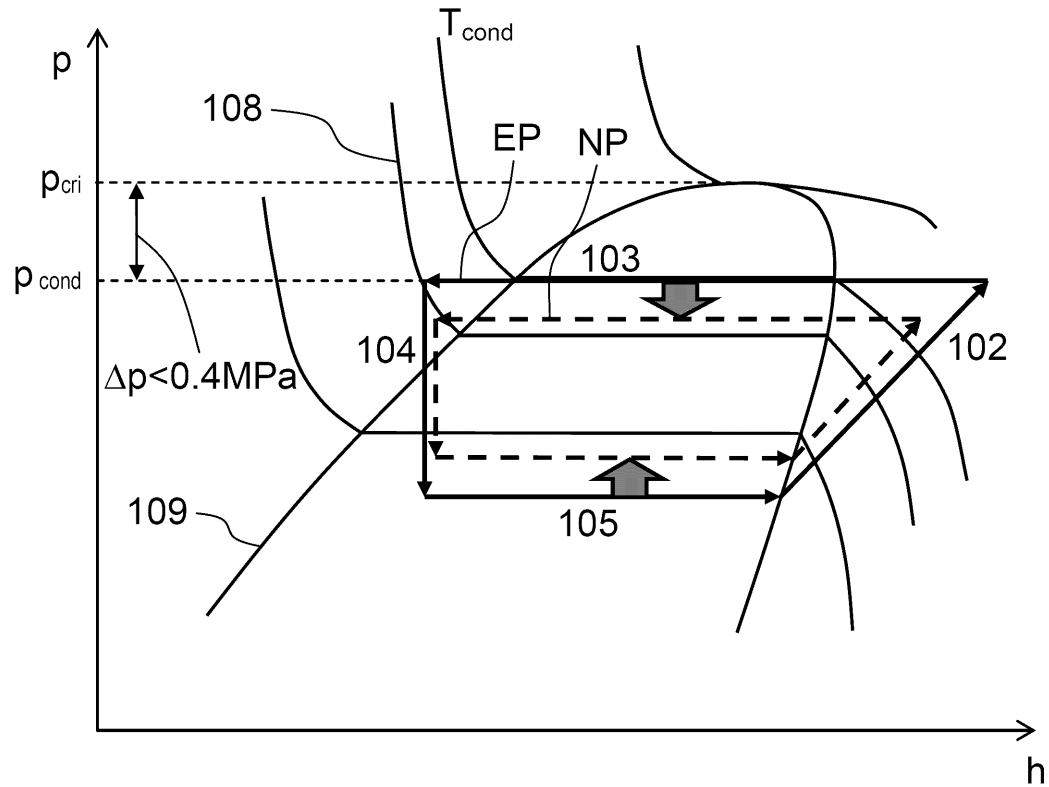
**FIG. 15**

FIG. 16



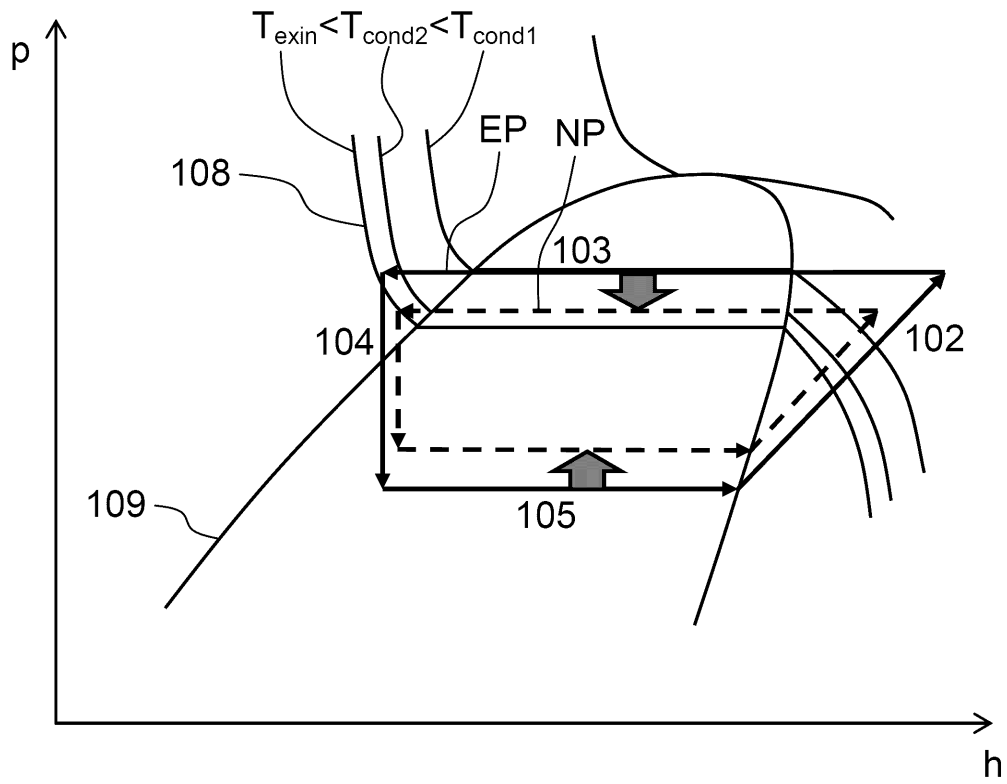
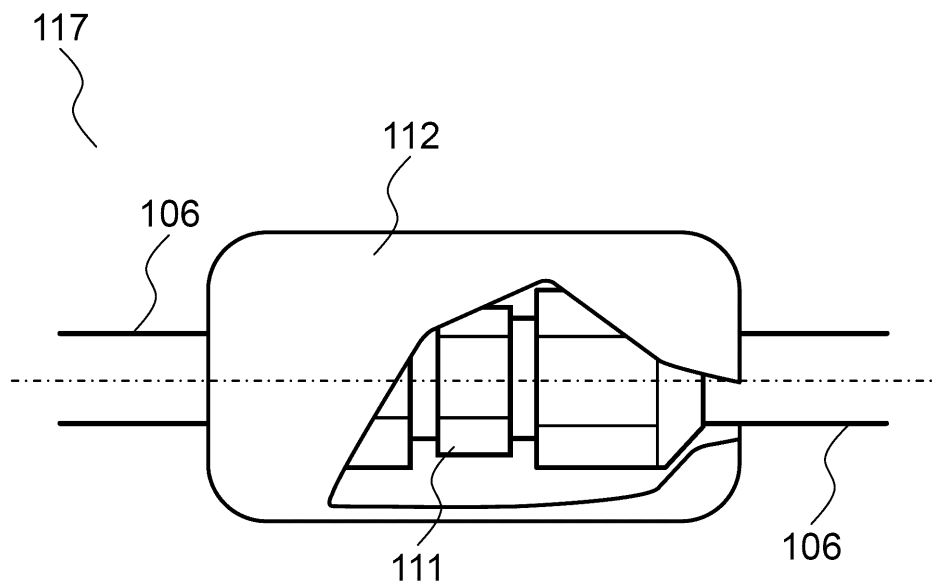
**FIG. 17****FIG. 18**

FIG. 19

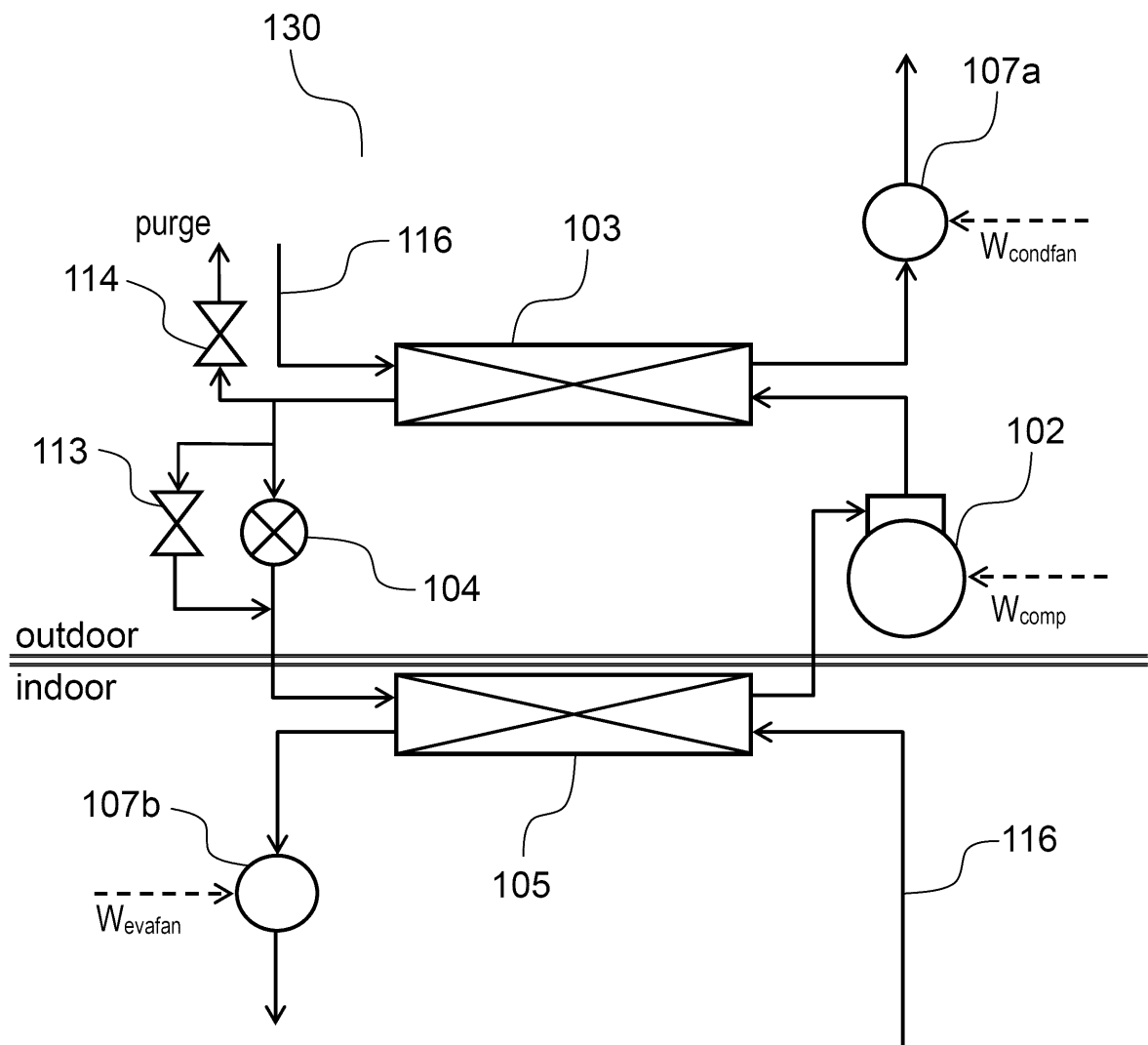
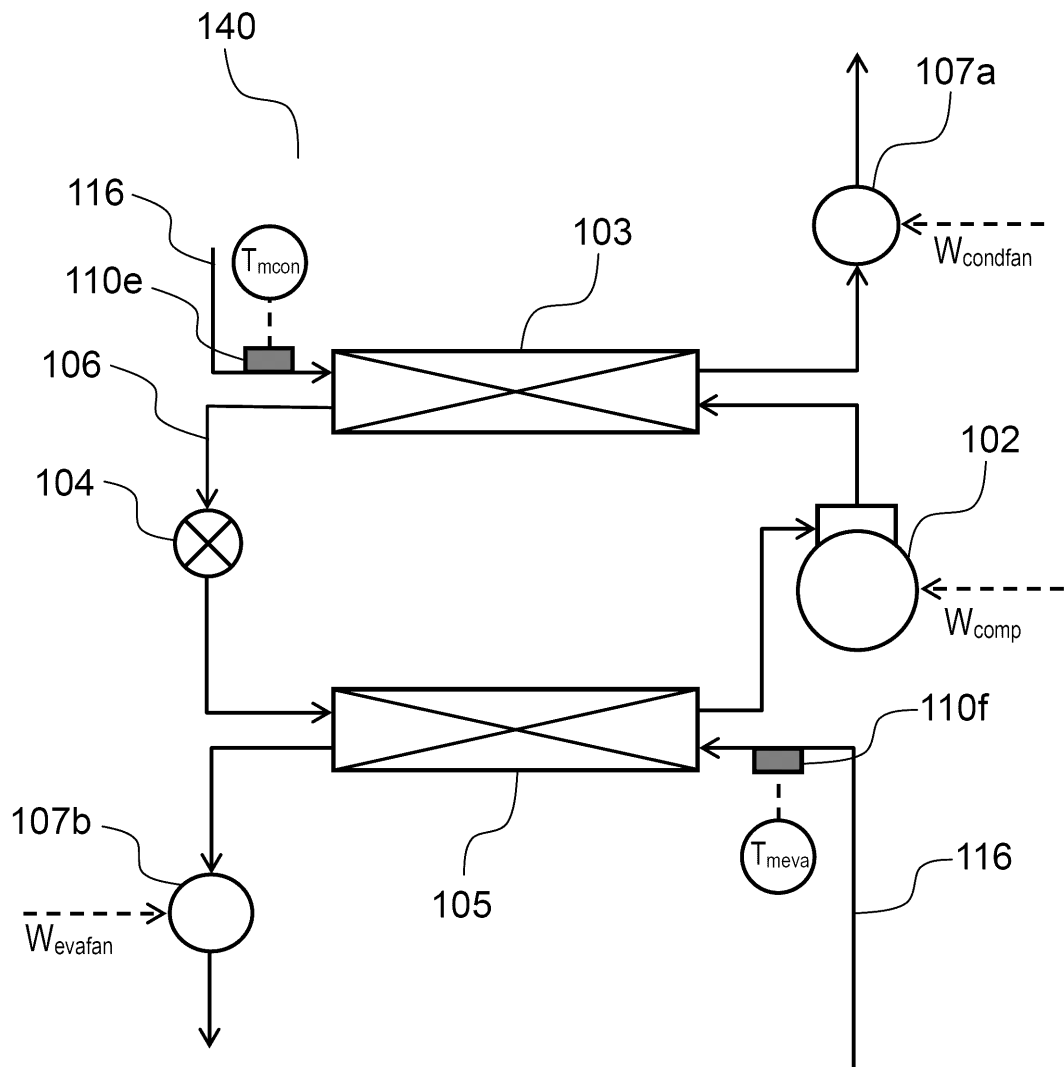


FIG. 20



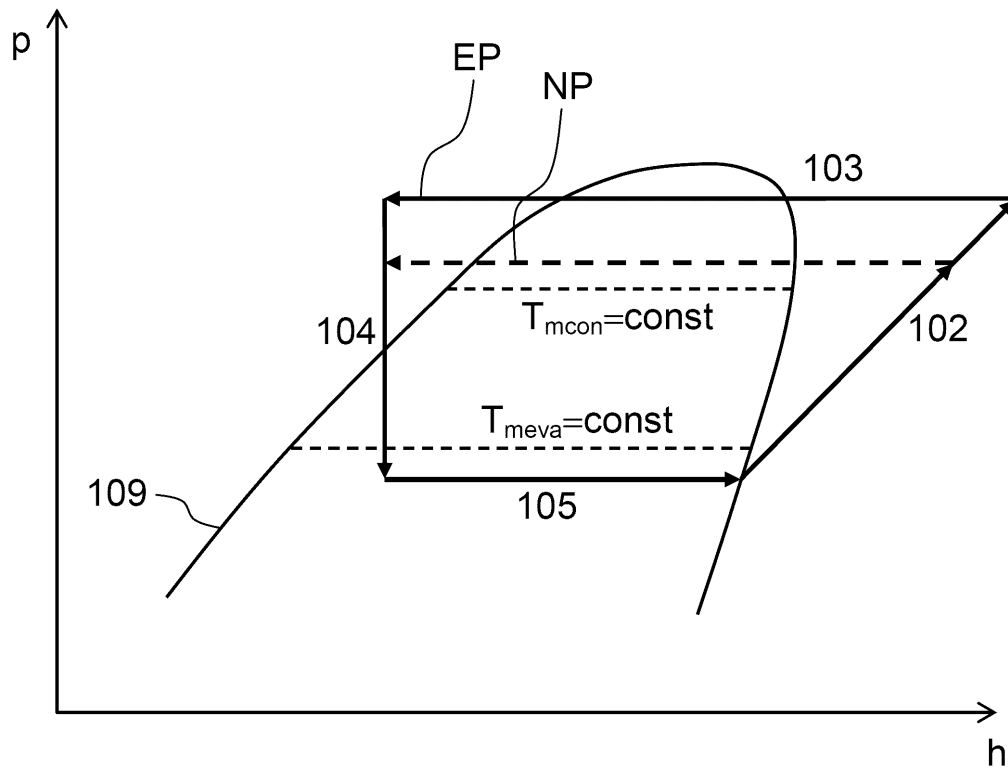
**FIG. 21**

FIG. 22

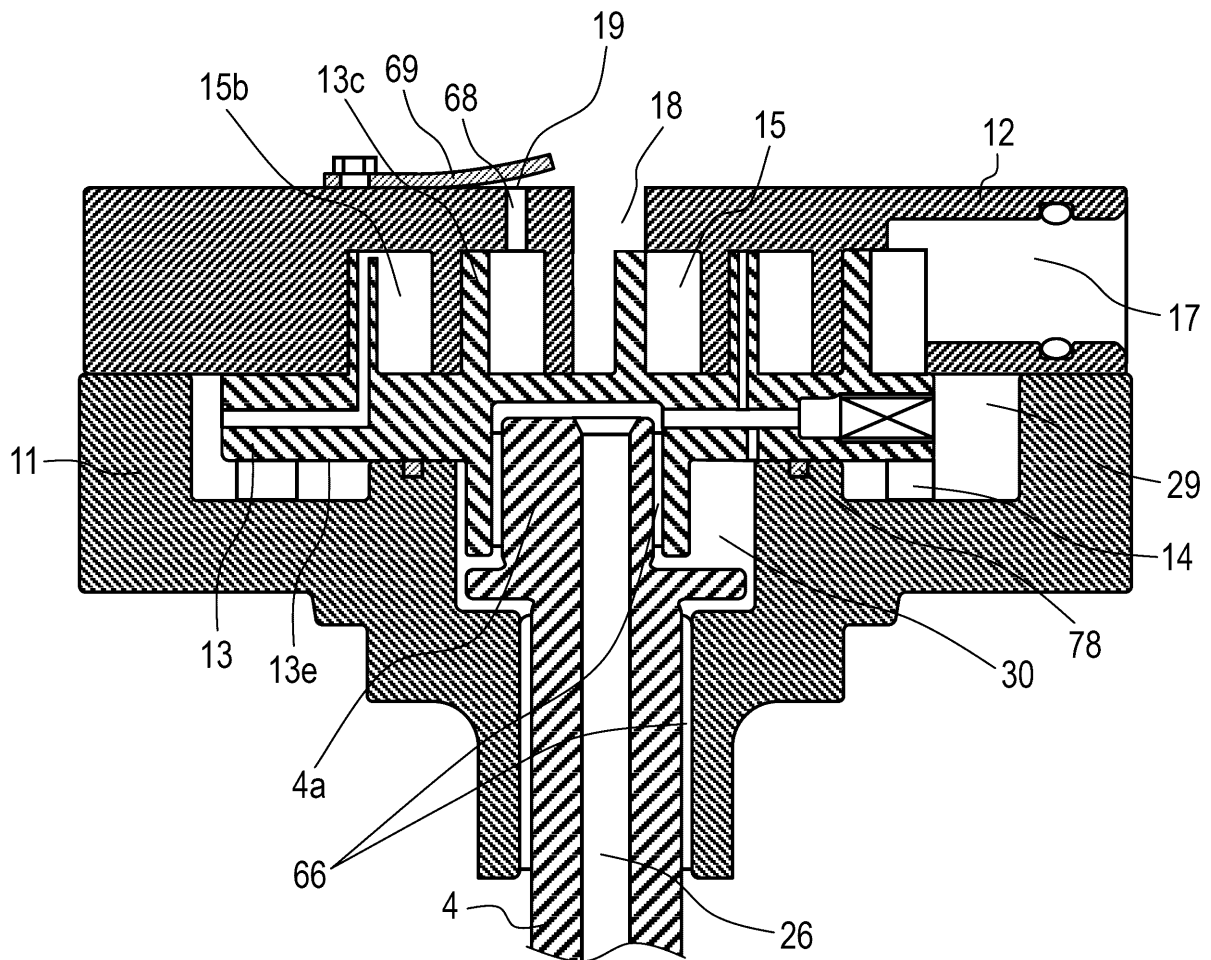
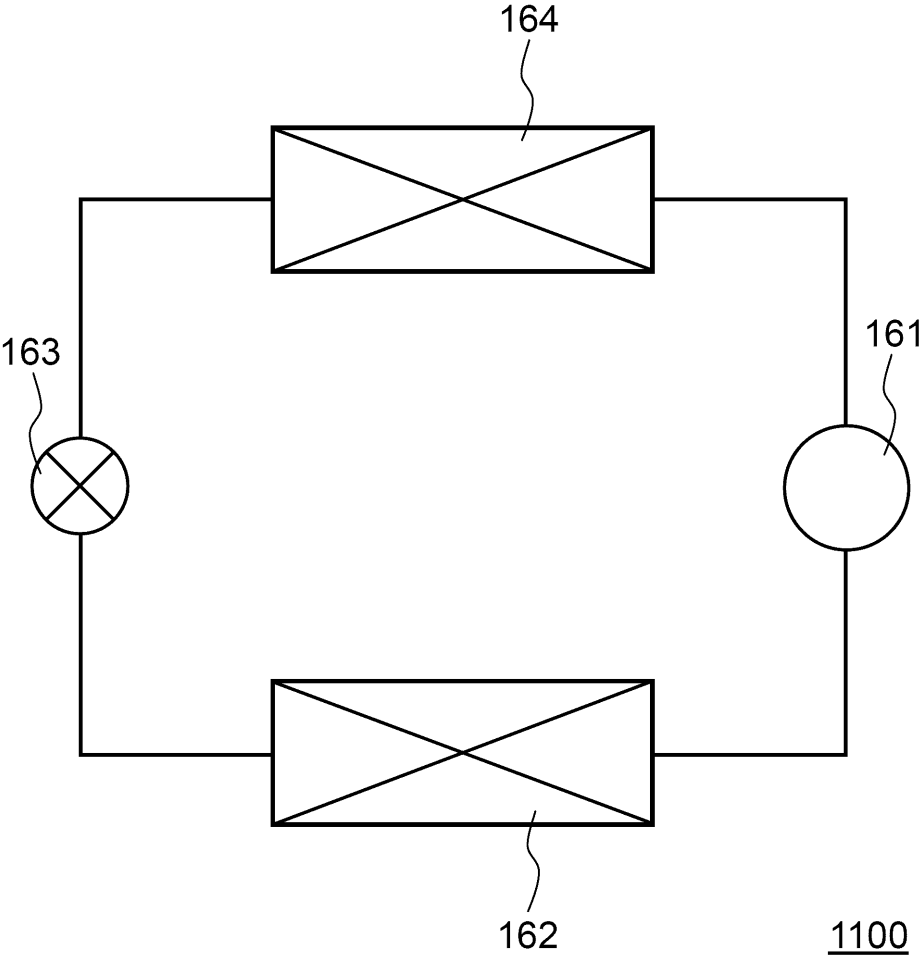


FIG. 23



**FIG. 24**

| REFRIGERANT                  |     | R410A | R32/R1123<br>60/40 | R32/R1123<br>50/50 | R32/R1123<br>40/60 | R32/R1123<br>30/70 | R1123 |
|------------------------------|-----|-------|--------------------|--------------------|--------------------|--------------------|-------|
| GWP                          | -   | 2090  | 410                | 350                | 280                | 210                | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.73  | 3.17               | 3.23               | 3.28               | 3.33               | 3.44  |
| EVAPORATION<br>PRESSURE      | MPa | 1.25  | 1.48               | 1.51               | 1.55               | 1.59               | 1.70  |
| DISCHARGE<br>TEMPERATURE     | °C  | 62    | 69                 | 68                 | 67                 | 66                 | 65    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 118%               | 119%               | 120%               | 121%               | 125%  |
| COP                          | %   | 100%  | 97%                | 96%                | 95%                | 94%                | 91%   |

**FIG. 25**

| REFRIGERANT                  |     | R410A | R32/R1123<br>60/40 | R32/R1123<br>50/50 | R32/R1123<br>40/60 | R32/R1123<br>30/70 | R1123 |
|------------------------------|-----|-------|--------------------|--------------------|--------------------|--------------------|-------|
| GWP                          | -   | 2090  | 410                | 350                | 280                | 210                | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.30  | 2.69               | 2.75               | 2.79               | 2.84               | 2.95  |
| EVAPORATION<br>PRESSURE      | MPa | 0.87  | 0.96               | 0.99               | 1.01               | 1.03               | 1.14  |
| DISCHARGE<br>TEMPERATURE     | °C  | 56    | 65                 | 64                 | 63                 | 62                 | 60    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 118%               | 119%               | 120%               | 121%               | 125%  |
| COP                          | %   | 100%  | 97%                | 96%                | 95%                | 94%                | 91%   |

**FIG. 26**

| REFRIGERANT                  |     | R410A | R125/1123<br>60/40 | R125/1123<br>50/50 | R125/1123<br>40/60 | R125/1123<br>30/70 | R1123 |
|------------------------------|-----|-------|--------------------|--------------------|--------------------|--------------------|-------|
| GWP                          |     | 2090  | 2100               | 1760               | 1410               | 1060               | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.73  | 2.73               | 2.85               | 2.97               | 3.09               | 3.44  |
| EVAPORATION<br>PRESSURE      | MPa | 1.25  | 1.29               | 1.36               | 1.43               | 1.50               | 1.70  |
| DISCHARGE<br>TEMPERATURE     | °C  | 62    | 60                 | 61                 | 62                 | 63                 | 65    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 96%                | 101%               | 105%               | 110%               | 125%  |
| COP                          | %   | 100%  | 95%                | 94%                | 93%                | 93%                | 91%   |

**FIG. 27**

| REFRIGERANT                  |     | R410A | R125/1123<br>60/40 | R125/1123<br>50/50 | R125/1123<br>40/60 | R125/1123<br>30/70 | R1123 |
|------------------------------|-----|-------|--------------------|--------------------|--------------------|--------------------|-------|
| GWP                          |     | 2090  | 2100               | 1760               | 1410               | 1060               | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.30  | 2.33               | 2.43               | 2.53               | 2.64               | 2.95  |
| EVAPORATION<br>PRESSURE      | MPa | 0.85  | 0.86               | 0.91               | 0.95               | 1.00               | 1.14  |
| DISCHARGE<br>TEMPERATURE     | °C  | 56    | 58                 | 58                 | 58                 | 59                 | 60    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 96%                | 101%               | 106%               | 111%               | 125%  |
| COP                          | %   | 100%  | 96%                | 95%                | 94%                | 93%                | 91%   |

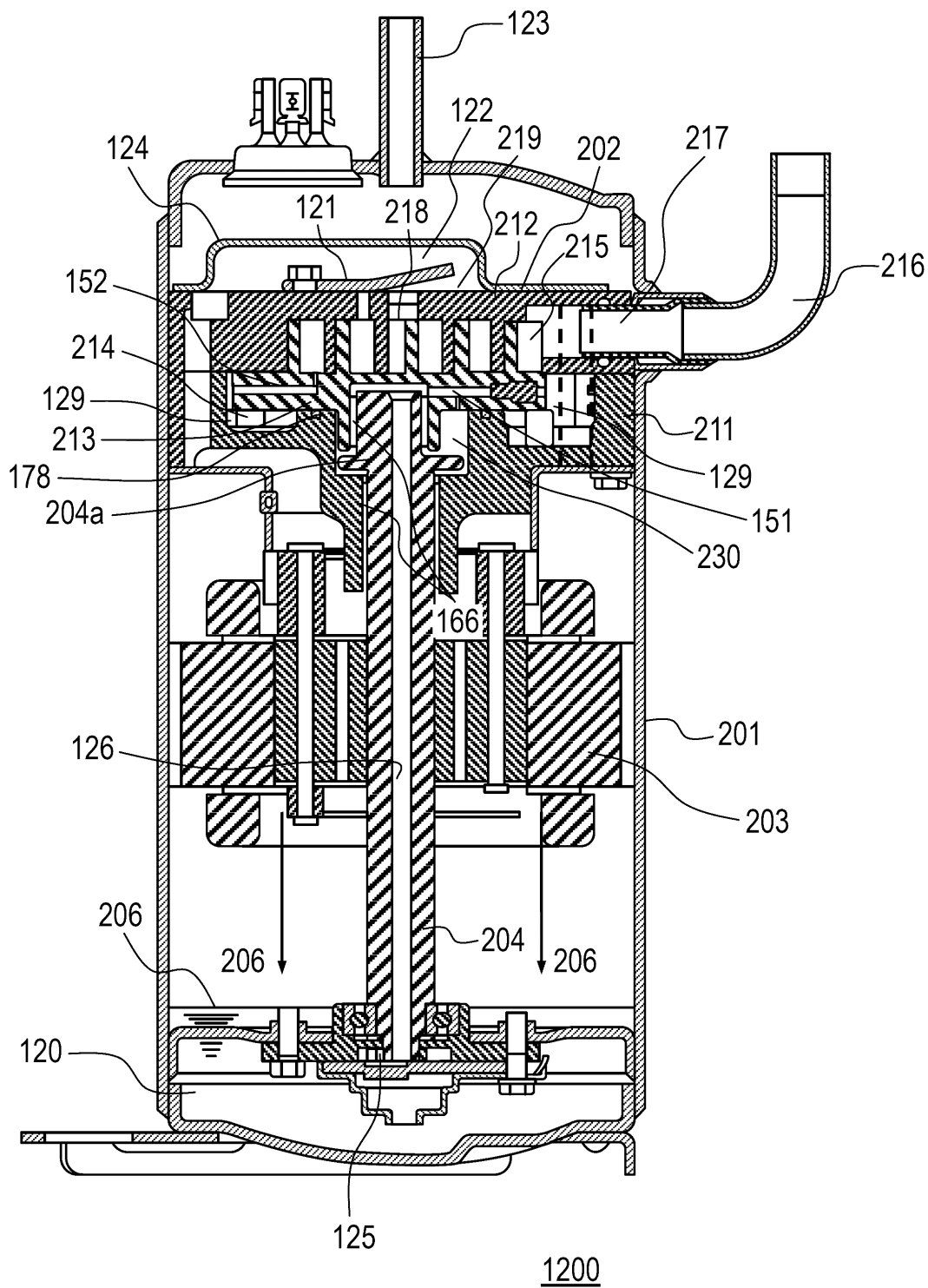
**FIG. 28**

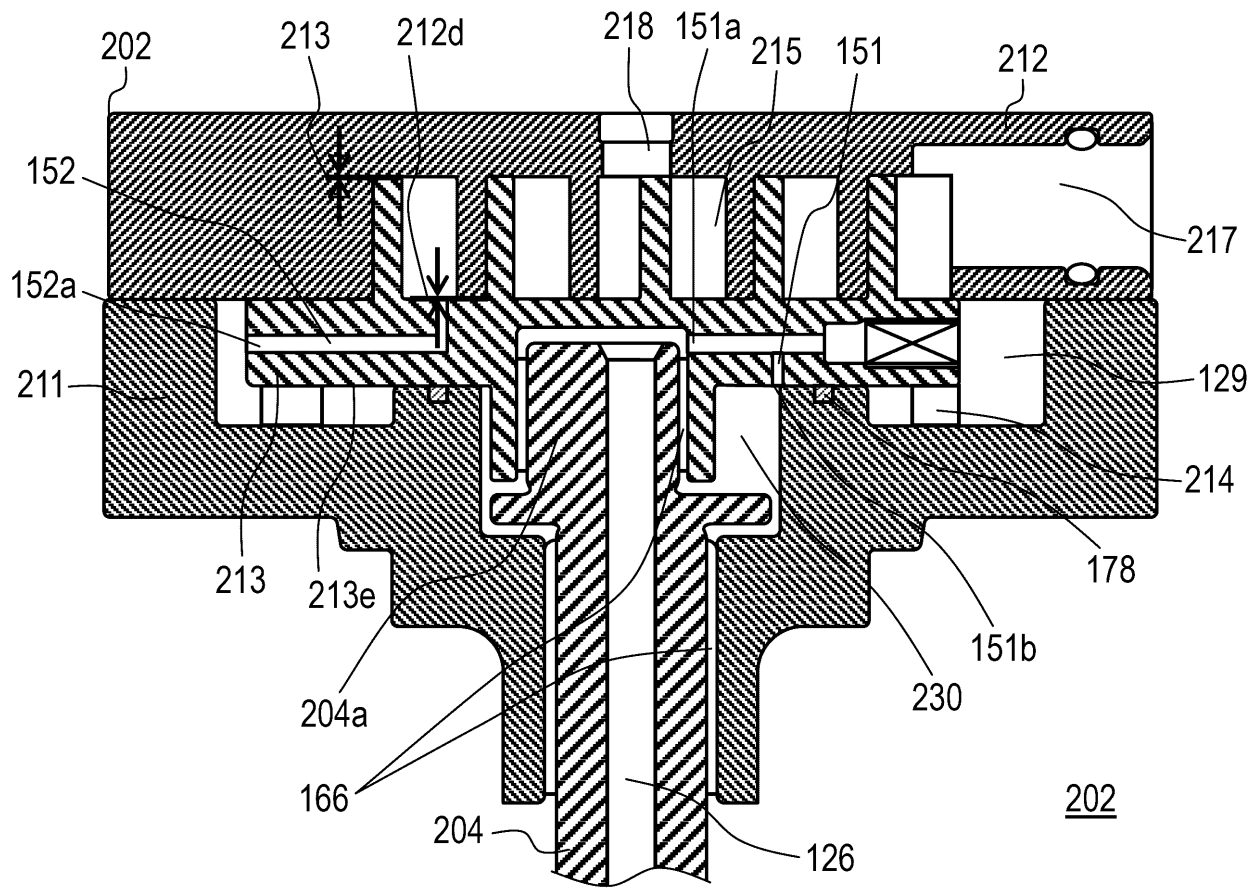
| REFRIGERANT                  |     | R410A | R32/R125/<br>R1123<br>30/30/40 | R32/R125/<br>R1123<br>25/25/50 | R32/R125/<br>R1123<br>20/20/60 | R32/R125/<br>R1123<br>15/15/70 | R1123 |
|------------------------------|-----|-------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------|
| GWP                          |     | 2090  | 1260                           | 1050                           | 840                            | 630                            | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.73  | 2.69                           | 2.68                           | 2.67                           | 2.66                           | 2.62  |
| EVAPORATION<br>PRESSURE      | MPa | 1.25  | 1.24                           | 1.23                           | 1.23                           | 1.22                           | 1.21  |
| DISCHARGE<br>TEMPERATURE     | °C  | 62    | 63                             | 64                             | 64                             | 65                             | 65    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 107%                           | 110%                           | 113%                           | 116%                           | 125%  |
| COP                          | %   | 100%  | 96%                            | 95%                            | 94%                            | 93%                            | 91%   |

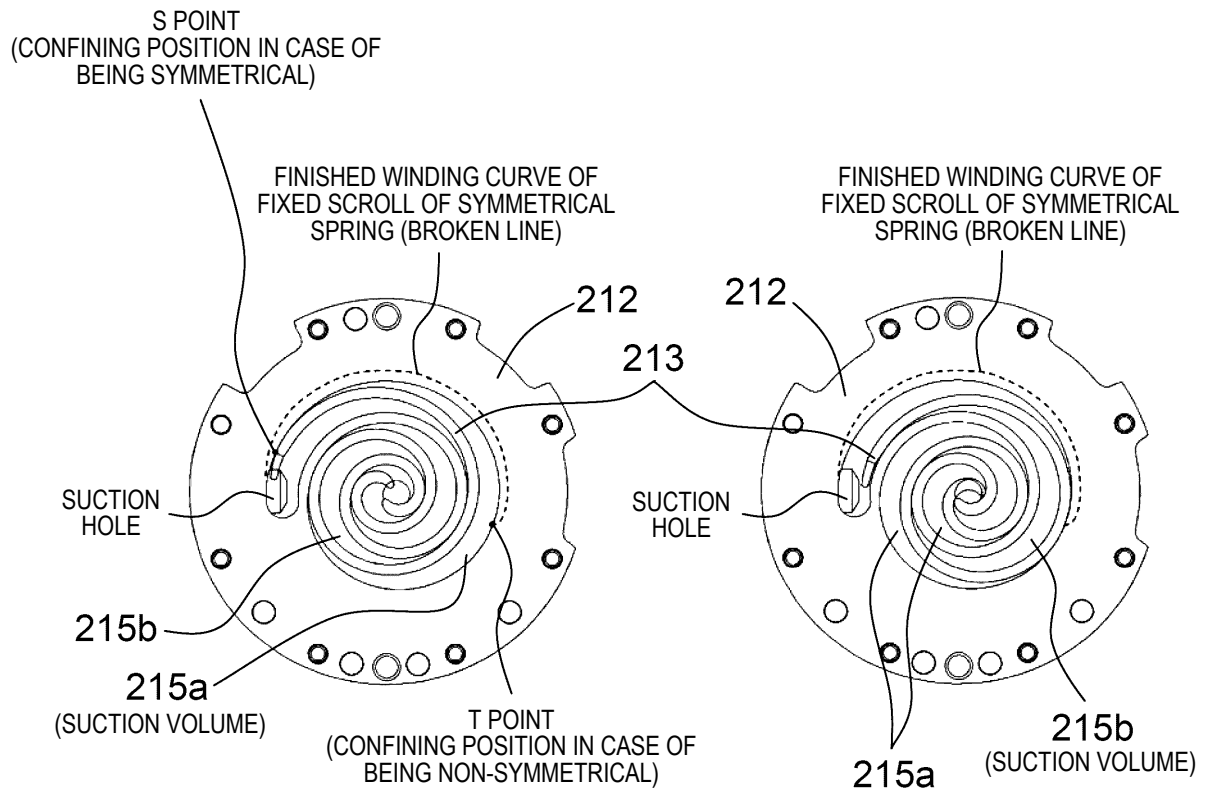
**FIG. 29**

| REFRIGERANT                  |     | R410A | R32/R125/<br>R1123<br>30/30/40 | R32/R125/<br>R1123<br>25/25/50 | R32/R125/<br>R1123<br>20/20/60 | R32/R125/<br>R1123<br>15/15/70 | R1123 |
|------------------------------|-----|-------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------|
| GWP                          |     | 2090  | 1260                           | 1050                           | 840                            | 630                            | 5     |
| CONDENSATION<br>PRESSURE     | MPa | 2.30  | 2.27                           | 2.27                           | 2.26                           | 2.25                           | 2.21  |
| EVAPORATION<br>PRESSURE      | MPa | 0.85  | 0.84                           | 0.84                           | 0.83                           | 0.83                           | 0.82  |
| DISCHARGE<br>TEMPERATURE     | °C  | 56    | 58                             | 58                             | 59                             | 59                             | 60    |
| REFRIGERATION<br>PERFORMANCE | %   | 100%  | 107%                           | 110%                           | 113%                           | 116%                           | 125%  |
| COP                          | %   | 100%  | 96%                            | 96%                            | 95%                            | 94%                            | 91%   |

**FIG. 30**



**FIG. 31**

**FIG. 32**

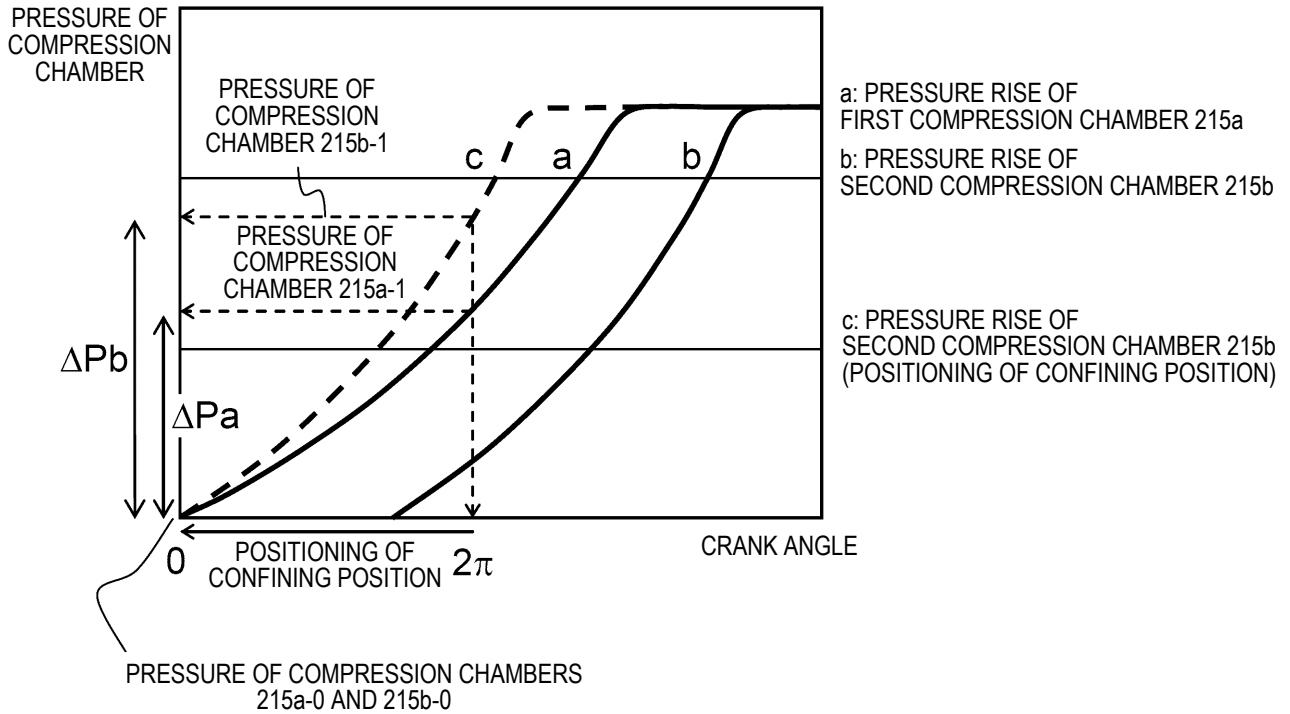
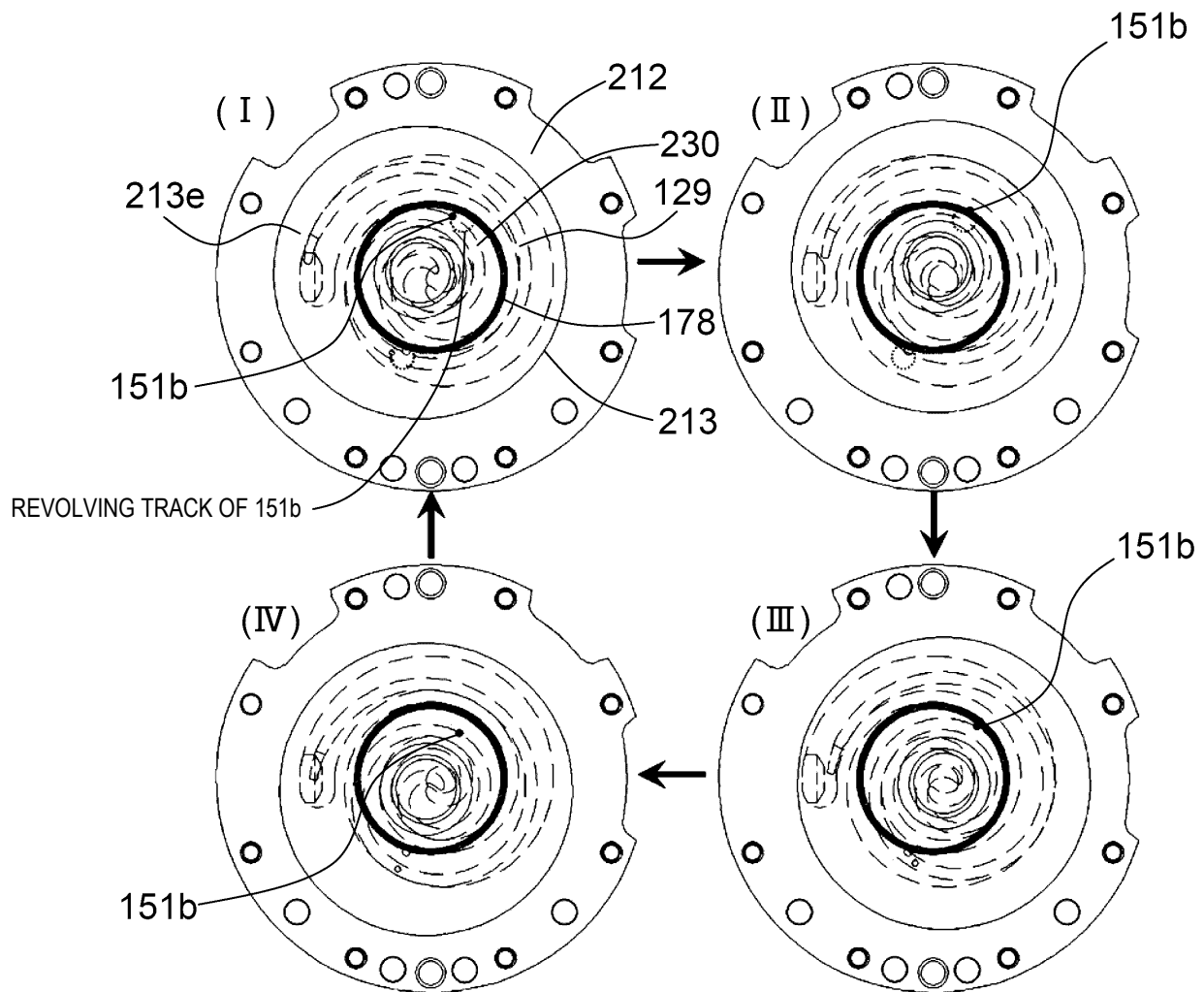
**FIG. 33**

FIG. 34



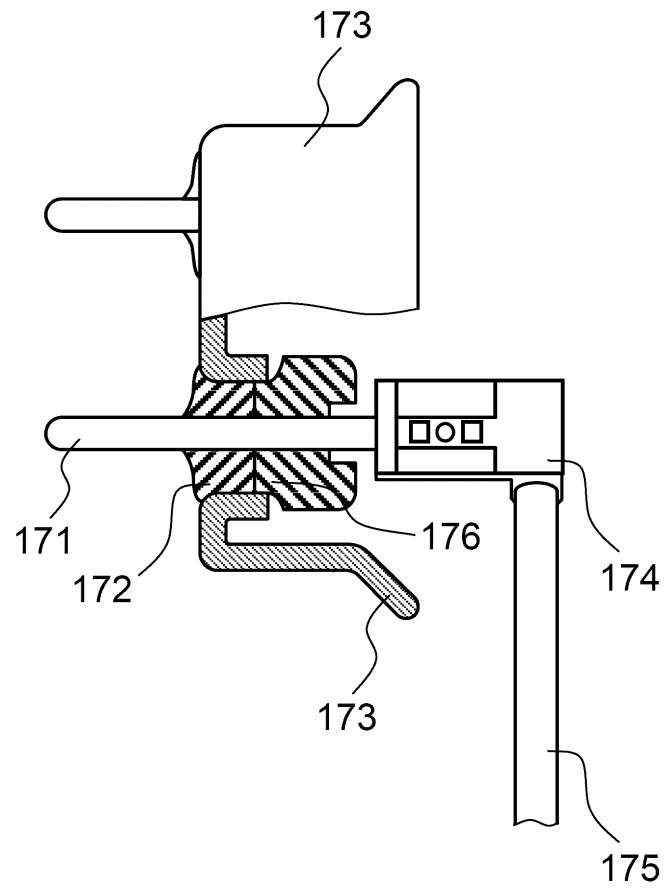
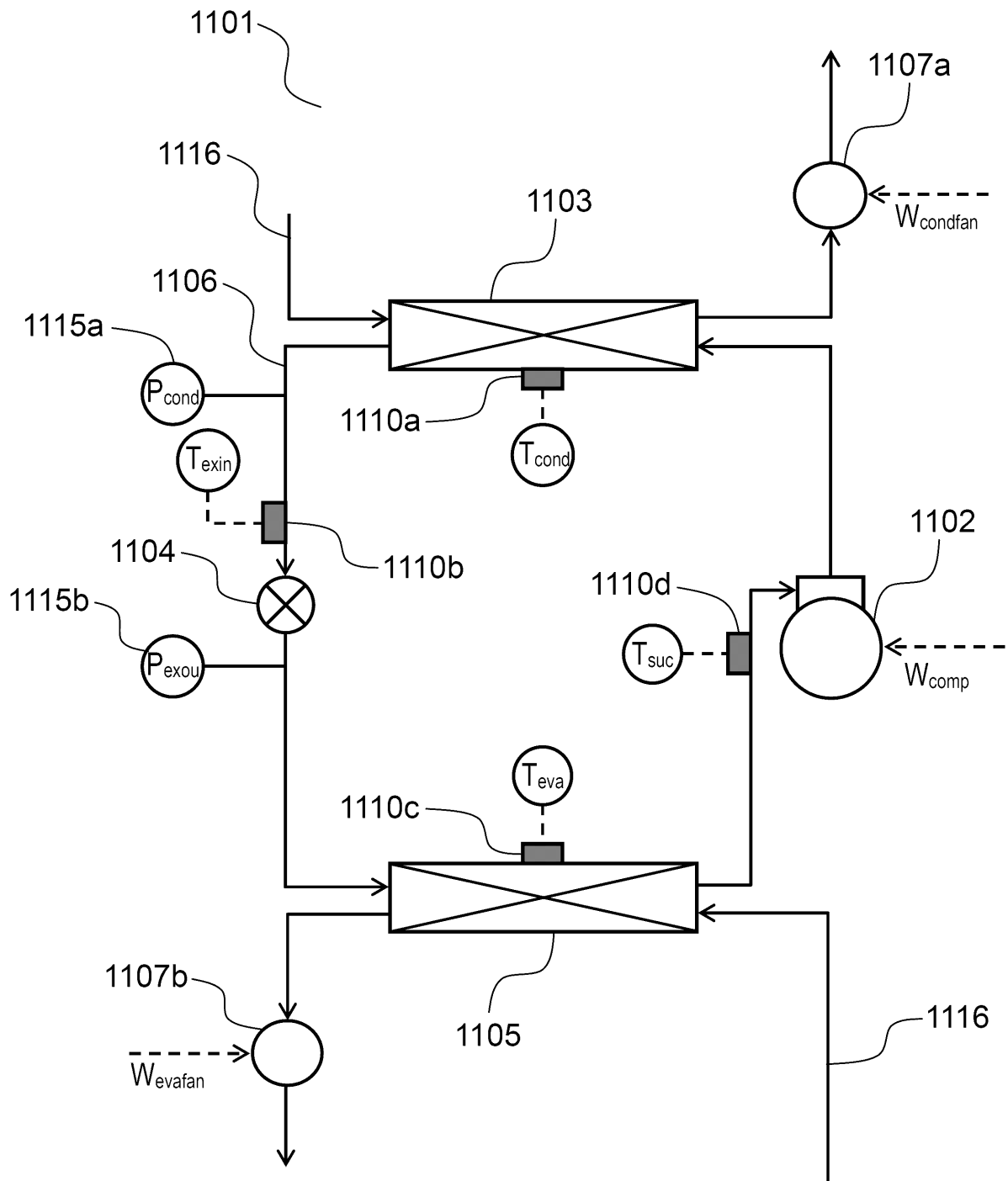
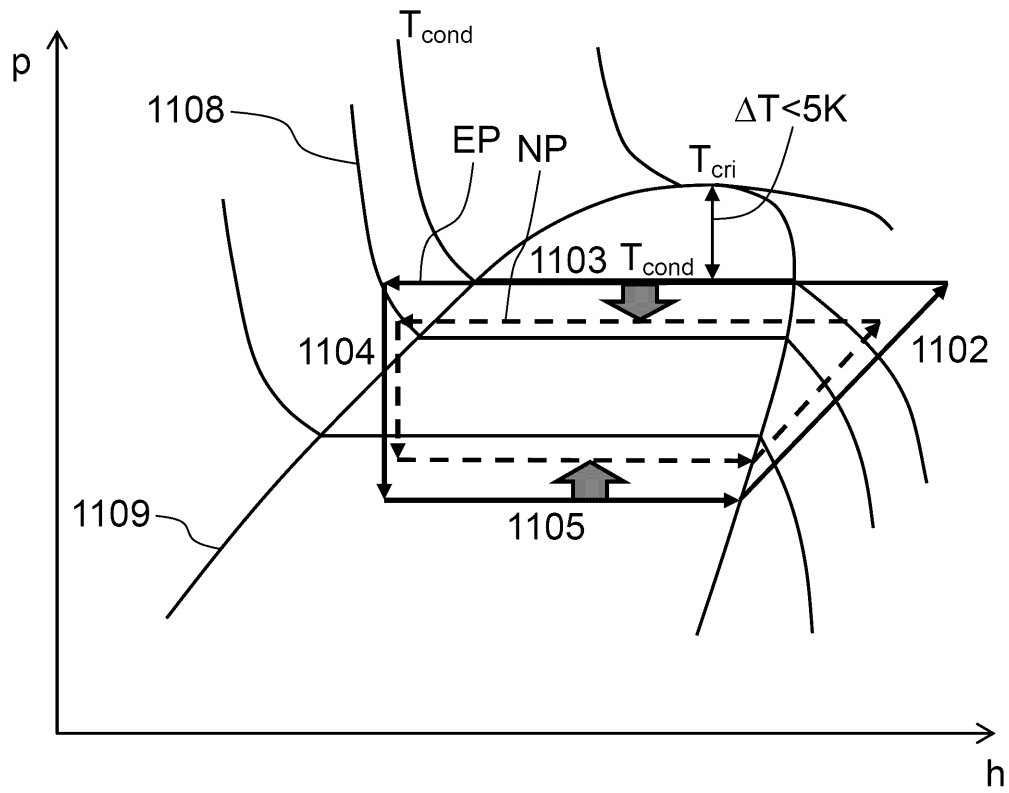
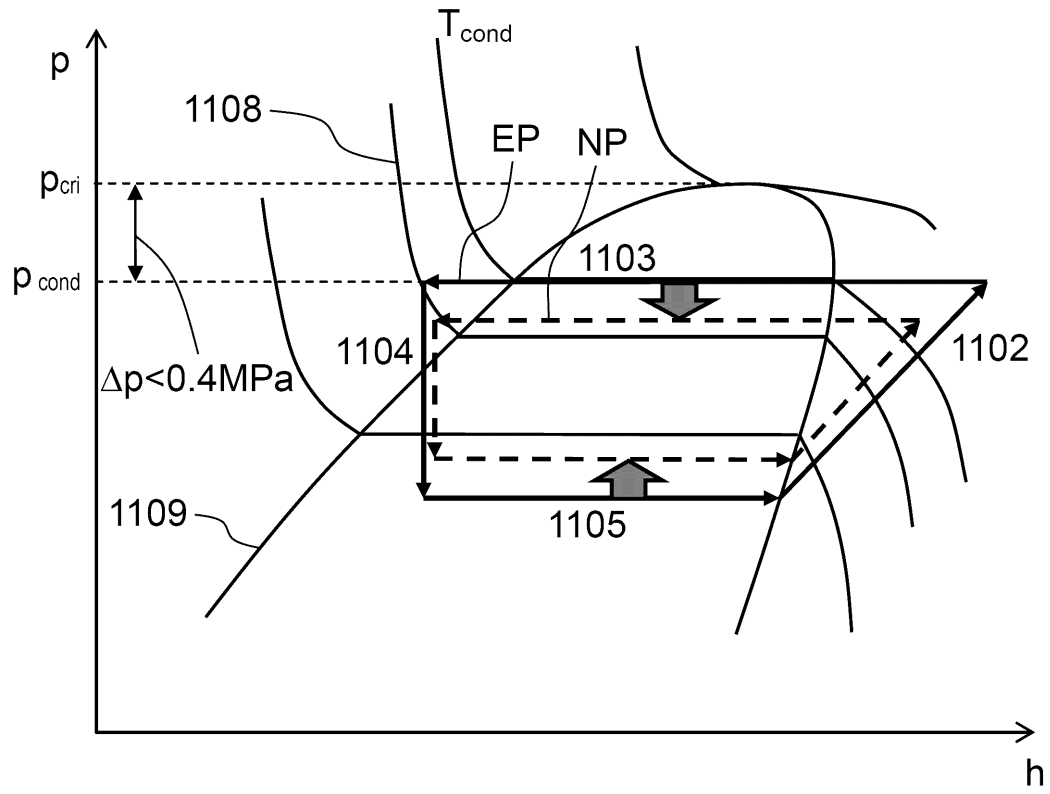
**FIG. 35**

FIG. 36



**FIG. 37**

**FIG. 38**

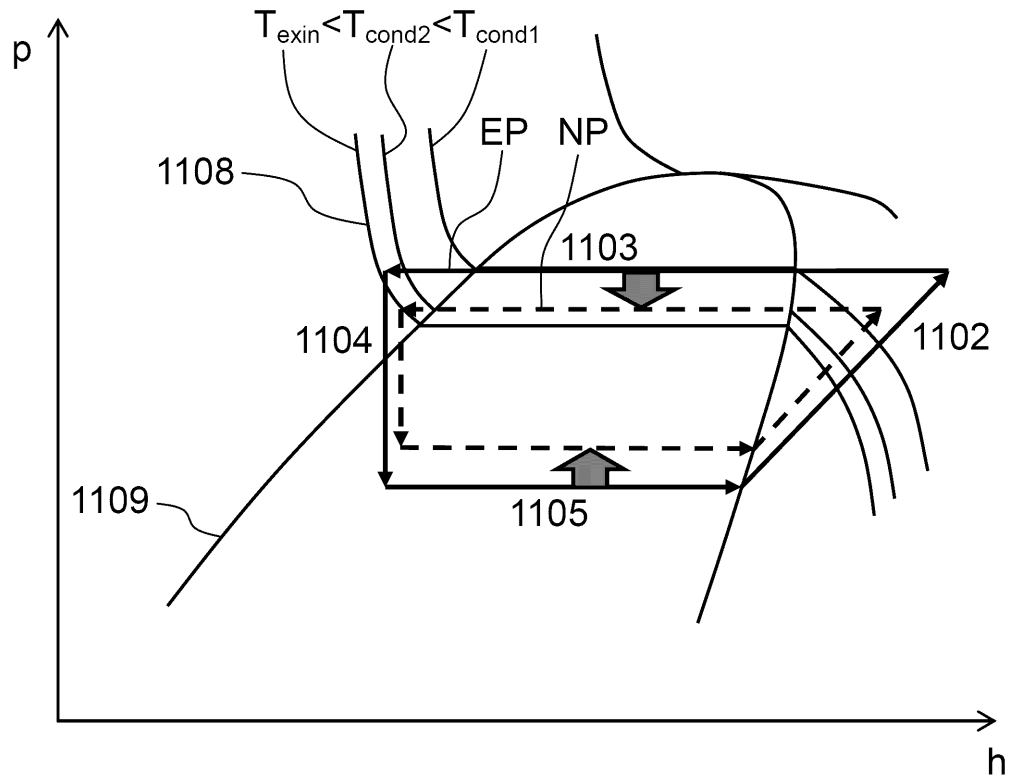
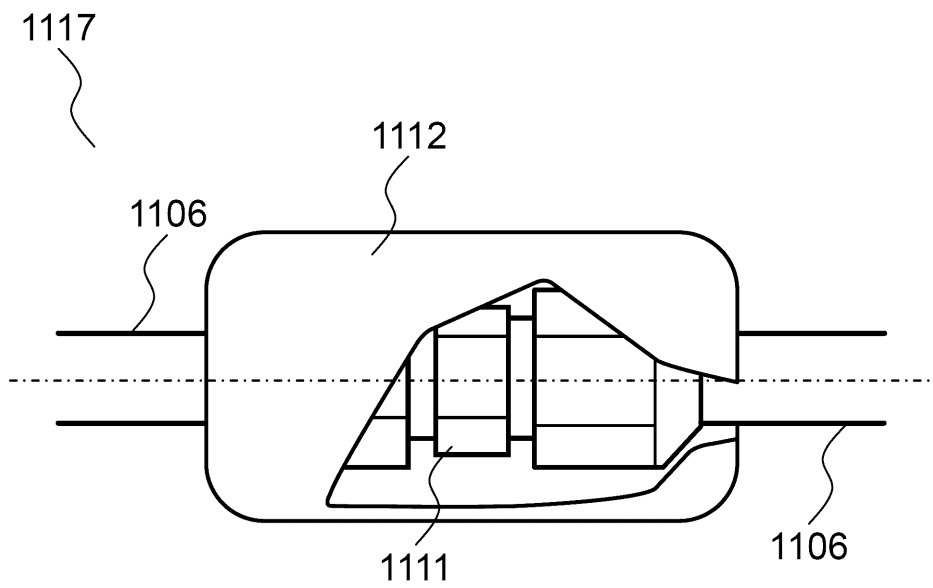
**FIG. 39****FIG. 40**

FIG. 41

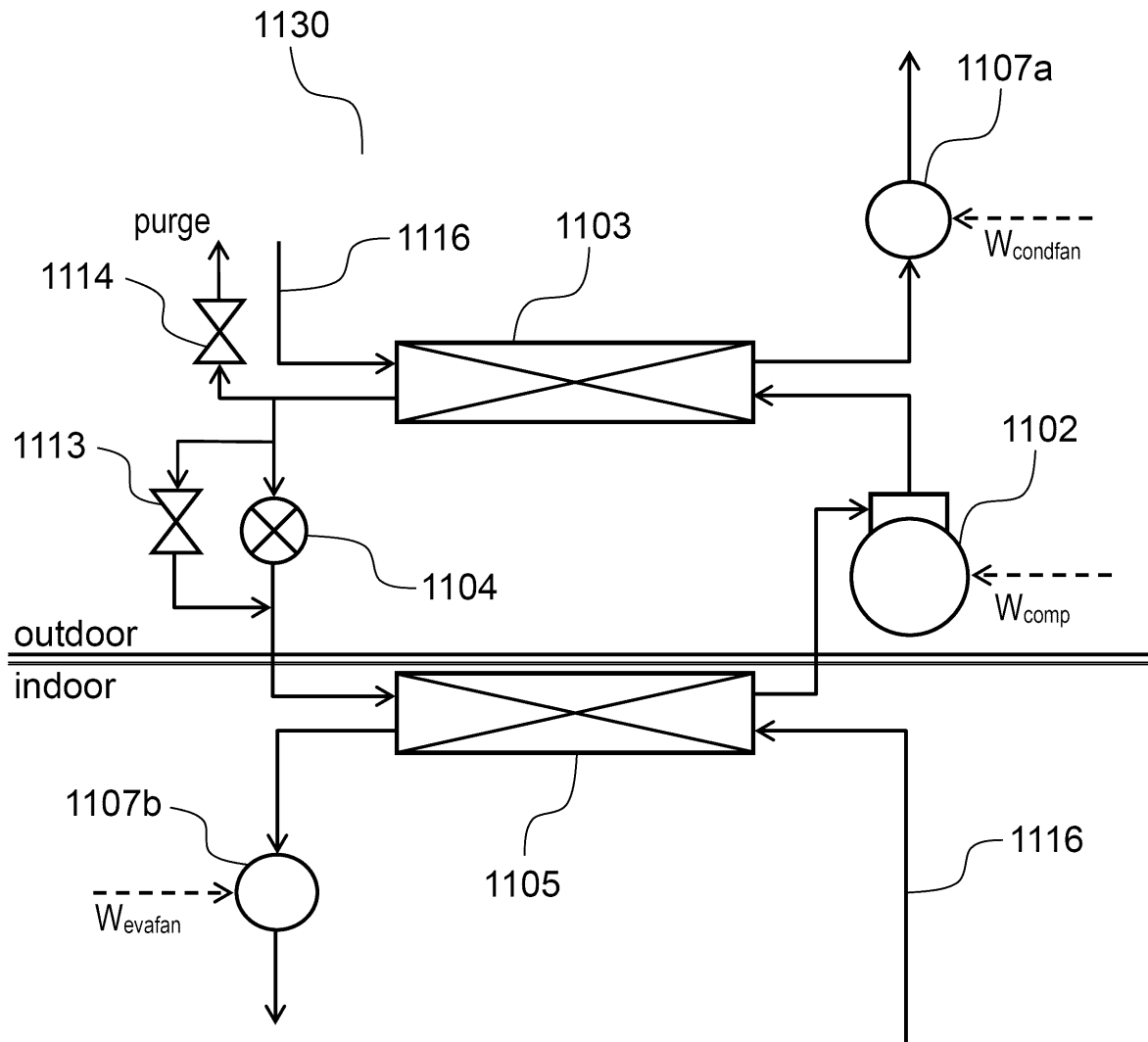
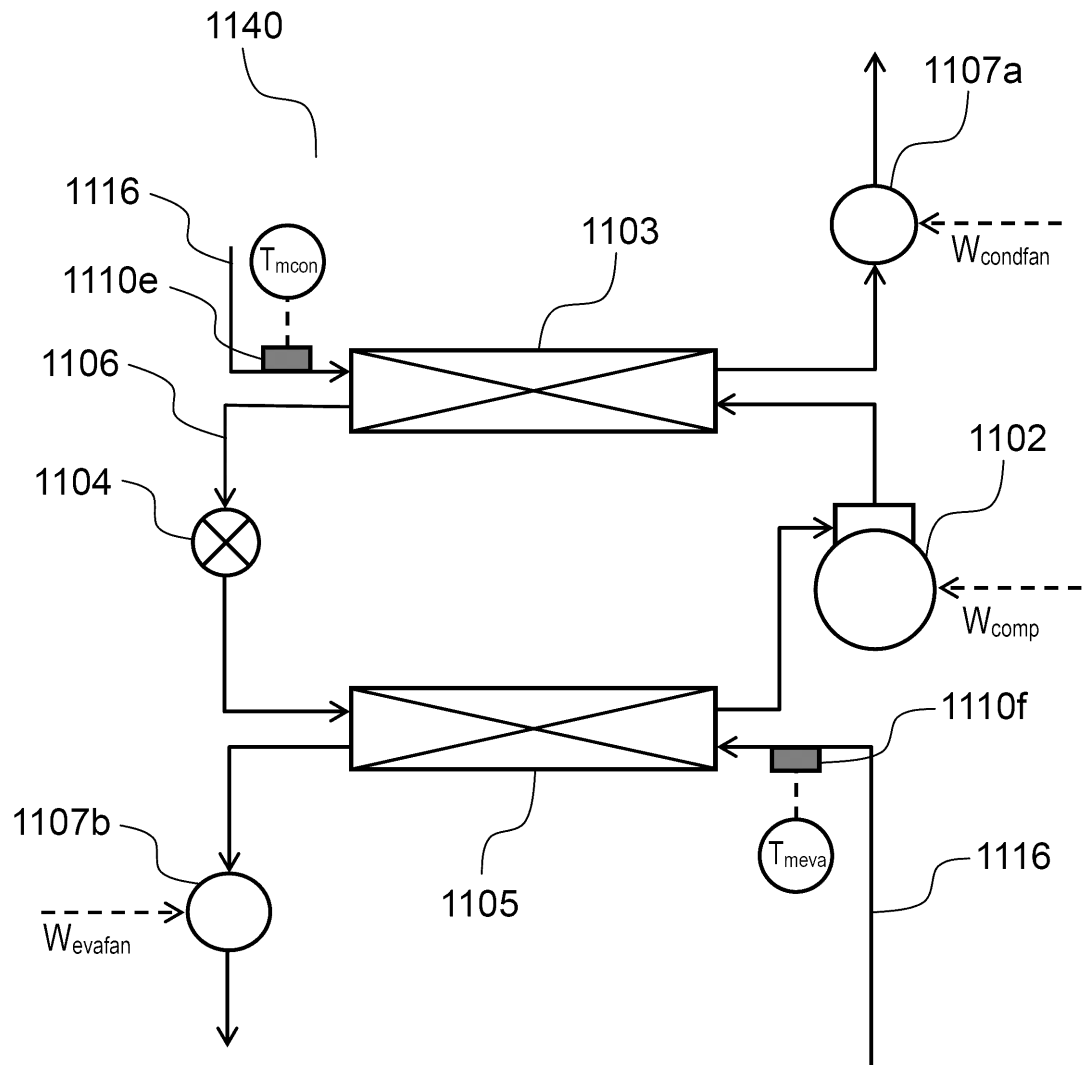
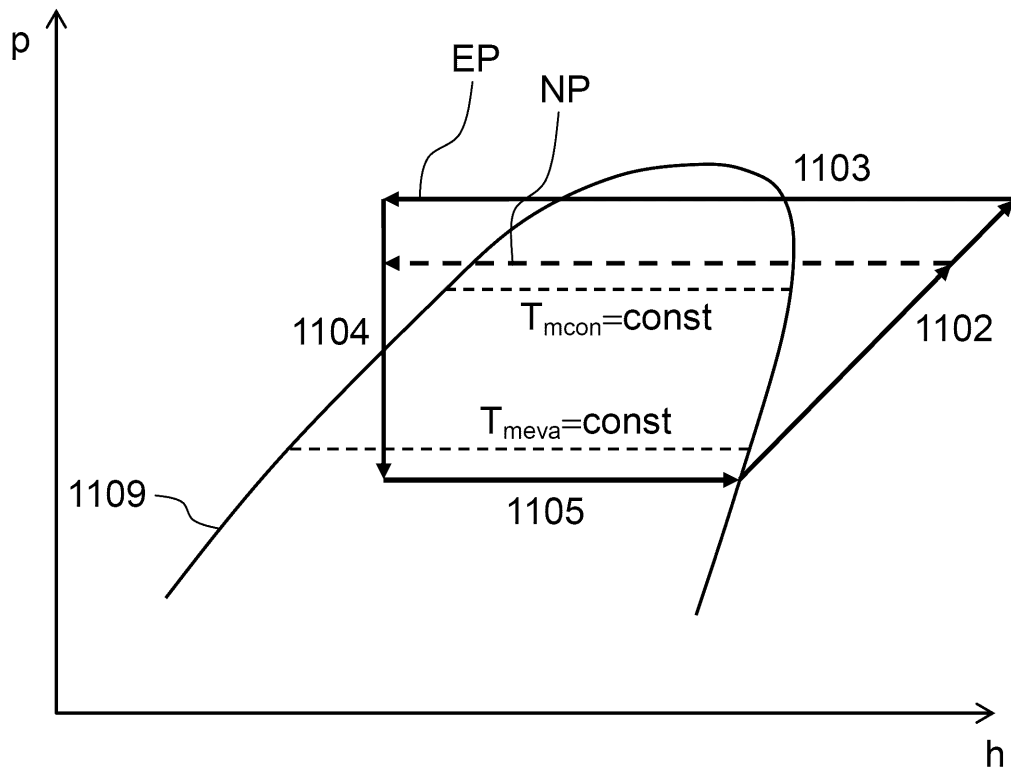


FIG. 42



**FIG. 43**

**FIG. 44**