|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **State** | **Temperature (ºC)** | **Pressure (Bar)** | **Entropy** | **Enthalpy** |
| 1Segment A | -18.0 | 2.65 | 1.78 | 397.91 |
| 2s | 96.05 | 24.27 | 1.78 | 455.57 |
| 2 | 111.63 | 24.27 | 1.81 | 469.98 |
| 3 | 60.0 | 24.27 | 1.25 | 277.61 |
| 4 | -18.0 | - | - | 277.61 |
|  |  |  |  |  |
| Work Input | 134.84 kW |  | | |
| COP Beta | 2.03 |

Table 1: Refrigerant R-22

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **State** | **Temperature (ºC)** | **Pressure (Bar)** | **Entropy** | **Enthalpy** |
| 1Segment A | -18.0 | 2.08 | 6.35 | 1583.55 |
| 2s | 178.93 | 26.16 | 6.35 | 1990.15 |
| 2 | 217.18 | 26.16 | 6.56 | 2091.80 |
| 3 | 60.0 | 26.16 | 2.42 | 634.12 |
| 4 | -18.0 | - | - | 635.12 |
|  |  |  |  |  |
| Work Input | 120.60 kW |  | | |
| COP Beta | 2.33 |

Table 1: Refrigerant Ammonia

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **State** | **Temperature (ºC)** | **Pressure (Bar)** | **Entropy** | **Enthalpy** |
| 1Segment A | -18.0 | 1.45 | 1.73 | 387.79 |
| 2s | 69.59 | 16.81 | 1.73 | 439.18 |
| 2 | 80.19 | 16.81 | 1.78 | 452.02 |
| 3 | 60.0 | 16.81 | 1.28 | 287.50 |
| 4 | -18.0 | - | - | 287.50 |
|  |  |  |  |  |
| Work Input | 144.17 kW |  | | |
| COP Beta | 1.95 |

Table 1: Refrigerant R-134a