

Betriebskostenberechnung - Stulz CyberCool 2 Chiller



| | | |
|-----------------------|-------------------|-----------|
| Gerät/Typ | ESO 9702 AHF-ze#8 | |
| Standort | Germany - Hamburg | |
| Energiekosten | 0,19 | [EUR/kWh] |
| Max. Aussentemperatur | 38 | [°C] |
| Kälteleistung | 932,1 | [kW] |
| Teillast | 100 | [%] |
| Kaltwassereintritt | 20,0 | [°C] |
| Kaltwasseraustritt | 9,0 | [°C] |
| Glykolgehalt | 30 | [%] |
| Höhe über NN | 0 | [m] |
| Lüfter-Diffusor | Ja | [-] |

| | | |
|------------------------|------------|---------|
| Jahresenergieverbrauch | 658.119 | [kWh/a] |
| Jahresbetriebskosten | 125.042,61 | [EUR] |
| Jahres-EER | 12,41 | [-] |

| Temp. | [-] | Status | DX Leistung | FC Leistung | TWA (FK) | Totale Leistung | Kompressor | | Lüfter/Lüfter-Diffusor | | Pumpe | | FC-Pumpe | | Total |
|-------|-------|--------|-------------|-------------|----------|-----------------|------------|---------|------------------------|---------|-------|---------|----------|---------|---------|
| | | | | | | | [kW] | [kWh/a] | [kW] | [kWh/a] | [kW] | [kWh/a] | [kW] | [kWh/a] | |
| [°C] | [h/a] | | [kW] | [kW] | [°C] | [kW] | [kW] | [kWh/a] | [kW] | [kWh/a] | [kW] | [kWh/a] | [kW] | [kWh/a] | [kWh/a] |
| 38 | 0 | DX | 932 | 0 | 0,0 | 932 | 248,2 | 0 | 26,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| 37 | 0 | DX | 932 | 0 | 0,0 | 932 | 243,3 | 0 | 26,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| 36 | 0 | DX | 932 | 0 | 0,0 | 932 | 235,8 | 0 | 26,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| 35 | 0 | DX | 932 | 0 | 0,0 | 932 | 230,9 | 0 | 26,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| 34 | 0 | DX | 932 | 0 | 0,0 | 932 | 223,4 | 0 | 26,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| 33 | 0 | DX | 932 | 0 | 0,0 | 932 | 218,4 | 0 | 26,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| 32 | 0 | DX | 932 | 0 | 0,0 | 932 | 211,0 | 0 | 26,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| 31 | 1 | DX | 932 | 0 | 0,0 | 932 | 206,0 | 206 | 26,0 | 26 | 0,0 | 0 | 0,0 | 0 | 232 |
| 30 | 12 | DX | 932 | 0 | 0,0 | 932 | 198,6 | 2.383 | 26,0 | 312 | 0,0 | 0 | 0,0 | 0 | 2.695 |
| 29 | 13 | DX | 932 | 0 | 0,0 | 932 | 193,6 | 2.517 | 26,0 | 338 | 0,0 | 0 | 0,0 | 0 | 2.855 |
| 28 | 14 | DX | 932 | 0 | 0,0 | 932 | 188,7 | 2.642 | 26,0 | 364 | 0,0 | 0 | 0,0 | 0 | 3.006 |
| 27 | 13 | DX | 932 | 0 | 0,0 | 932 | 181,2 | 2.356 | 26,0 | 338 | 0,0 | 0 | 0,0 | 0 | 2.694 |
| 26 | 40 | DX | 932 | 0 | 0,0 | 932 | 176,2 | 7.048 | 26,0 | 1.040 | 0,0 | 0 | 0,0 | 0 | 8.088 |
| 25 | 52 | DX | 932 | 0 | 0,0 | 932 | 168,8 | 8.778 | 26,0 | 1.352 | 0,0 | 0 | 0,0 | 0 | 10.130 |
| 24 | 54 | DX | 932 | 0 | 0,0 | 932 | 163,8 | 8.845 | 26,0 | 1.404 | 0,0 | 0 | 0,0 | 0 | 10.249 |
| 23 | 98 | DX | 932 | 0 | 0,0 | 932 | 156,4 | 15.327 | 26,0 | 2.548 | 0,0 | 0 | 0,0 | 0 | 17.875 |
| 22 | 132 | DX | 932 | 0 | 0,0 | 932 | 151,4 | 19.985 | 26,0 | 3.432 | 0,0 | 0 | 0,0 | 0 | 23.417 |
| 21 | 169 | DX | 932 | 0 | 0,0 | 932 | 144,0 | 24.336 | 26,0 | 4.394 | 0,0 | 0 | 0,0 | 0 | 28.730 |
| 20 | 231 | DX | 932 | 0 | 0,0 | 932 | 139,0 | 32.109 | 26,0 | 6.006 | 0,0 | 0 | 0,0 | 0 | 38.115 |
| 19 | 271 | DX | 932 | 0 | 0,0 | 932 | 131,6 | 35.664 | 26,0 | 7.046 | 0,0 | 0 | 0,0 | 0 | 42.710 |
| 18 | 321 | MIX | 792 | 140 | 18,3 | 932 | 119,1 | 38.231 | 26,0 | 8.346 | 0,0 | 0 | 0,0 | 0 | 46.577 |
| 17 | 357 | MIX | 746 | 186 | 17,8 | 932 | 106,7 | 38.092 | 26,0 | 9.282 | 0,0 | 0 | 0,0 | 0 | 47.374 |
| 16 | 348 | MIX | 699 | 233 | 17,3 | 932 | 67,0 | 23.316 | 26,0 | 9.048 | 0,0 | 0 | 0,0 | 0 | 32.364 |
| 15 | 395 | MIX | 652 | 280 | 16,7 | 932 | 62,1 | 24.530 | 26,0 | 10.270 | 0,0 | 0 | 0,0 | 0 | 34.800 |
| 14 | 419 | MIX | 606 | 326 | 16,2 | 932 | 57,1 | 23.925 | 26,0 | 10.894 | 0,0 | 0 | 0,0 | 0 | 34.819 |
| 13 | 346 | MIX | 559 | 373 | 15,6 | 932 | 52,1 | 18.027 | 26,0 | 8.996 | 0,0 | 0 | 0,0 | 0 | 27.023 |
| 12 | 337 | MIX | 513 | 419 | 15,1 | 932 | 49,6 | 16.715 | 26,0 | 8.762 | 0,0 | 0 | 0,0 | 0 | 25.477 |
| 11 | 394 | MIX | 466 | 466 | 14,5 | 932 | 44,7 | 17.612 | 26,0 | 10.244 | 0,0 | 0 | 0,0 | 0 | 27.856 |
| 10 | 379 | MIX | 419 | 513 | 13,9 | 932 | 39,7 | 15.046 | 26,0 | 9.854 | 0,0 | 0 | 0,0 | 0 | 24.900 |
| 9 | 408 | MIX | 373 | 559 | 13,4 | 932 | 34,8 | 14.198 | 26,0 | 10.608 | 0,0 | 0 | 0,0 | 0 | 24.806 |
| 8 | 445 | MIX | 326 | 606 | 12,9 | 932 | 29,8 | 13.261 | 26,0 | 11.570 | 0,0 | 0 | 0,0 | 0 | 24.831 |
| 7 | 473 | MIX | 280 | 652 | 12,3 | 932 | 27,3 | 12.913 | 26,0 | 12.298 | 0,0 | 0 | 0,0 | 0 | 25.211 |
| 6 | 435 | MIX | 233 | 699 | 11,8 | 932 | 22,3 | 9.701 | 26,0 | 11.310 | 0,0 | 0 | 0,0 | 0 | 21.011 |
| 5 | 396 | MIX | 186 | 746 | 11,2 | 932 | 17,4 | 6.890 | 26,0 | 10.296 | 0,0 | 0 | 0,0 | 0 | 17.186 |
| 4 | 368 | MIX | 140 | 792 | 10,7 | 932 | 12,4 | 4.563 | 26,0 | 9.568 | 0,0 | 0 | 0,0 | 0 | 14.131 |
| 3 | 356 | MIX | 93 | 839 | 10,1 | 932 | 9,9 | 3.524 | 26,0 | 9.256 | 0,0 | 0 | 0,0 | 0 | 12.780 |
| 2 | 276 | MIX | 47 | 885 | 9,6 | 932 | 5,0 | 1.380 | 26,0 | 7.176 | 0,0 | 0 | 0,0 | 0 | 8.556 |
| 1 | 283 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 21,8 | 6.169 | 0,0 | 0 | 0,0 | 0 | 6.169 |
| 0 | 251 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 17,4 | 4.367 | 0,0 | 0 | 0,0 | 0 | 4.367 |
| -1 | 243 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 14,0 | 3.402 | 0,0 | 0 | 0,0 | 0 | 3.402 |
| -2 | 174 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 11,4 | 1.984 | 0,0 | 0 | 0,0 | 0 | 1.984 |
| -3 | 80 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 9,1 | 728 | 0,0 | 0 | 0,0 | 0 | 728 |
| -4 | 53 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 7,3 | 387 | 0,0 | 0 | 0,0 | 0 | 387 |
| -5 | 53 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 6,0 | 318 | 0,0 | 0 | 0,0 | 0 | 318 |
| -6 | 25 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 4,7 | 118 | 0,0 | 0 | 0,0 | 0 | 118 |
| -7 | 24 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 3,9 | 94 | 0,0 | 0 | 0,0 | 0 | 94 |
| -8 | 8 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 3,1 | 25 | 0,0 | 0 | 0,0 | 0 | 25 |
| -9 | 6 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 2,6 | 16 | 0,0 | 0 | 0,0 | 0 | 16 |
| -10 | 4 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 2,1 | 8 | 0,0 | 0 | 0,0 | 0 | 8 |
| -11 | 3 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 1,8 | 5 | 0,0 | 0 | 0,0 | 0 | 5 |
| -12 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 1,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -13 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 1,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -14 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 1,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -15 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,8 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -16 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,8 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -17 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,5 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -18 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,5 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -19 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,5 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -20 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,5 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -21 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -22 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -23 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -24 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -25 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -26 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -27 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -28 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -29 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| -30 | 0 | FC | 0 | 932 | 9,0 | 932 | 0,0 | 0 | 0,3 | 0 | 0,0 | 0 | 0,0 | 0 | 0 |
| | 8.760 | | | | | | | 444.120 | | 213.999 | | 0 | | | 658.119 |

Quelle für Wetterdaten: Meteonorm, www.meteonorm.com