**综合能耗节能率计算书**

公共建筑

|  |  |
| --- | --- |
| 工程名称 | 广东工业大学图书馆 |
| 工程地点 | 广东-广州 |
| 设计编号 |  |
| 建设单位 |  |
| 设计单位 |  |
| 设 计 人 |  |
| 审 核 人 |  |
| 审 定 人 |  |
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# 建筑概况

|  |  |
| --- | --- |
| 工程名称 | 广东工业大学图书馆 |
| 工程地点 | 广东-广州 |
| 地理位置 | 北纬：23.08° | 东经：113.14° |
| 建筑面积(m2) | 地上39847 地下6681 |
| 建筑层数 | 地上9 地下1 |
| 建筑高度（m） | 地上42.0 地下5.6 |
| 建筑体积(m3) | 189088.28 |
| 建筑外表面积(m2) | 26421.70 |
| 北向角度 | 90 |
| 结构类型 | 框架剪力墙结构 |
| 外墙太阳辐射吸收系数 | 0.75 |
| 屋顶太阳辐射吸收系数 | 0.75 |

# 计算依据

1. 《绿色建筑评价标准》(GB/T50378-2019)

2. 《民用建筑绿色性能计算标准》(JGJ/T 449-2018)

3. 《建筑能效标识技术标准》(JGJ/T 288-2012)

4. 《公共建筑节能设计标准》(GB50189-2015)

5. 《民用建筑热工设计规范》(GB50176)

# 计算要求

## 计算目标

依据《绿色建筑评价标准》(GB/T50378-2019)第7.2.8相关内容，对于采取措施后的建筑能耗降低幅度进行计算。

## 计算方法

建立参照建筑，参照建筑的热工参数、采暖空调照明形式及设备满足现行国家节能标准要求。

根据现行行业标准《民用建筑绿色性能计算标准》JGJ/T449的相关规定，分别计算设计建筑及参照建筑的供暖空调和照明系统能耗，计算其节能率并进行得分判定。

即：建筑能耗节能率 ＝ （参照建筑全年采暖空调照明耗电量 － 设计建筑全年采暖空调照明耗电量） / 参照建筑全年采暖空调照明耗电量 × 100%

# 围护结构

## 工程材料

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料名称 | 导热系数λ | 蓄热系数S | 密度ρ | 比热容Cp | 蒸汽渗透系数u | 备注 |
| W/(m.K) | W/(㎡.K) | kg/m3 | J/(kg.K) | g/(m.h.kPa) |
| 水泥砂浆 | 0.930 | 11.370 | 1800.0 | 1050.0 | 0.0210 | 来源：《民用建筑热工设计规范》GB50176-2016 |
| 石灰砂浆 | 0.810 | 10.070 | 1600.0 | 1050.0 | 0.0443 | 来源：《民用建筑热工设计规范》GB50176-2016 |
| 钢筋混凝土 | 1.740 | 17.200 | 2500.0 | 920.0 | 0.0158 | 来源：《民用建筑热工设计规范》GB50176-2016 |
| 碎石、卵石混凝土(ρ=2300) | 1.510 | 15.360 | 2300.0 | 920.0 | 0.0173 | 来源：《民用建筑热工设计规范》GB50176-2016 |
| 挤塑聚苯乙烯泡沫塑料（带表皮） | 0.030 | 0.340 | 35.0 | 1380.0 | 0.0000 | 来源：《民用建筑热工设计规范》GB50176-2016，蒸汽渗透系数没有给出 |
| 混凝土多孔砖(190六孔砖） | 0.750 | 7.490 | 1450.0 | 709.4 | 0.0000 |  |
| 水泥砂浆 | 0.930 | 11.306 | 1800.0 | 1050.0 | 0.0000 |  |
| 水泥砂浆 | 0.930 | 11.306 | 1800.0 | 1050.0 | 0.0000 |  |
| 水泥砂浆 | 0.930 | 11.306 | 1800.0 | 1050.0 | 0.0000 |  |
| 花岗岩、玄武岩 | 3.490 | 25.569 | 2800.0 | 920.0 | 0.0000 |  |
| 水泥砂浆 | 0.930 | 11.306 | 1800.0 | 1050.0 | 0.0000 |  |
| 花岗岩、玄武岩 | 3.490 | 25.569 | 2800.0 | 920.0 | 0.0000 |  |
| 砾石、石灰岩 | 2.040 | 18.099 | 2400.0 | 920.0 | 0.0000 |  |
| 水泥砂浆 | 0.930 | 11.306 | 1800.0 | 1050.0 | 0.0000 |  |
| 石油沥青(ρ=1400) | 0.270 | 6.796 | 1400.0 | 1680.0 | 0.0000 |  |
| 水泥砂浆 | 0.930 | 11.306 | 1800.0 | 1050.0 | 0.0000 |  |
| 加气混凝土、泡沫混凝土(ρ=700) | 0.220 | 3.429 | 700.0 | 1050.0 | 0.0000 |  |
| 加气混凝土砌体 | 0.220 | 3.601 | 700.0 | 1158.0 | 0.0000 | 蒸汽渗透系数没有给出 |
| 钢筋混凝土 | 1.740 | 17.060 | 2500.0 | 920.0 | 0.0000 |  |

## 围护结构作法简要说明

**1. 屋顶构造：**上人屋面：（由上到下）

 砾石、石灰岩 20mm＋水泥砂浆 20mm＋石油沥青(ρ=1400) 6mm＋水泥砂浆 20mm＋加气混凝土、泡沫混凝土(ρ=700) 20mm＋加气混凝土砌体 150mm＋钢筋混凝土 100mm

**2. 外墙构造：**外墙构造二：（由外到内）

 水泥砂浆 20mm＋水泥砂浆 23mm＋水泥砂浆 15mm＋碎石、卵石混凝土(ρ=2300) 10mm＋水泥砂浆 30mm＋花岗岩、玄武岩 30mm＋水泥砂浆 20mm＋花岗岩、玄武岩 60mm

**3. 挑空楼板构造：**挑空楼板构造一：（由上到下）

 水泥砂浆 20mm＋钢筋混凝土 120mm＋水泥砂浆 20mm＋挤塑聚苯乙烯泡沫塑料（带表皮） 20mm＋水泥砂浆 20mm

**4. 幕墙：**断热铝合金窗+无色透明中空玻璃：

 传热系数3.000W/m^2.K，太阳得热系数0.609

**5. 天窗：**12A钢铝单框双玻窗（平均）：

 传热系数3.900W/m^2.K，太阳得热系数0.652

**6. 外窗：**普通铝合金窗+透明玻璃（5~6mm）：

 传热系数6.000W/m^2.K，太阳得热系数0.739

## 体形系数

|  |  |
| --- | --- |
| 外表面积 | 26421.70 |
| 建筑体积 | 189088.28 |
| 体形系数 | 0.14 |

## 窗墙比

### 窗墙比

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 朝向 | 立面 | 窗面积(㎡) | 墙面积(㎡) | 窗墙比 |
| 南向 | 南-默认立面 | 2108.28 | 3369.96 | 0.63 |
| 北向 | 北-默认立面 | 2275.91 | 3575.36 | 0.64 |
| 东向 | 东-默认立面 | 2117.50 | 2835.48 | 0.75 |
| 西向 | 西-默认立面 | 2053.88 | 2738.70 | 0.75 |

### 外窗表

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 朝向 | 立面 | 编号 | 尺寸 | 楼层 | 数量 | 单个面积（㎡） | 合计面积（㎡） |
| 南向 | 南-默认立面2108.28 |  | 11.10×5.10 | 1 | 1 | 56.61 | 56.61 |
|  | 3.01×4.80 | 2 | 1 | 14.44 | 14.44 |
|  | 1.80×2.70 | 2 | 1 | 4.86 | 4.86 |
|  | 0.08×4.80 | 2 | 1 | 0.40 | 0.40 |
|  | 2.96×4.80 | 2 | 2 | 14.22 | 28.44 |
|  | 6.50×4.80 | 2 | 2 | 31.18 | 62.36 |
|  | 3.18×4.80 | 2 | 1 | 15.24 | 15.24 |
|  | 4.20×2.20 | 2 | 1 | 9.24 | 9.24 |
|  | 3.72×4.80 | 2 | 1 | 17.87 | 17.87 |
|  | 6.54×3.80 | 3 | 1 | 24.83 | 24.83 |
|  | 8.60×3.80 | 3 | 1 | 32.66 | 32.66 |
|  | 0.14×3.80 | 3 | 1 | 0.51 | 0.51 |
|  | 8.46×3.80 | 3 | 1 | 32.15 | 32.15 |
|  | 7.56×3.80 | 3 | 1 | 28.71 | 28.71 |
|  | 8.46×3.80 | 3 | 1 | 32.15 | 32.15 |
|  | 0.06×5.80 | 4 | 1 | 0.35 | 0.35 |
|  | 16.94×5.80 | 4 | 1 | 98.22 | 98.22 |
|  | 0.13×5.80 | 4 | 1 | 0.78 | 0.78 |
|  | 8.46×5.80 | 4 | 1 | 49.07 | 49.07 |
|  | 12.13×5.80 | 4 | 1 | 70.38 | 70.38 |
|  | 7.49×5.80 | 4 | 1 | 43.44 | 43.44 |
|  | 8.54×5.80 | 4 | 1 | 49.50 | 49.50 |
|  | 6.36×5.80 | 4 | 1 | 36.89 | 36.89 |
|  | 1.20×3.70 | 4 | 1 | 4.44 | 4.44 |
|  | 0.04×5.80 | 4 | 1 | 0.23 | 0.23 |
|  | 8.54×4.80 | 5 | 1 | 40.97 | 40.97 |
|  | 8.46×4.80 | 5 | 1 | 40.61 | 40.61 |
|  | 20.53×4.80 | 5 | 1 | 98.57 | 98.57 |
|  | 0.05×4.80 | 5 | 1 | 0.22 | 0.22 |
|  | 17.72×4.80 | 5 | 1 | 85.06 | 85.06 |
|  | 0.05×4.80 | 5 | 1 | 0.22 | 0.22 |
|  | 8.46×4.80 | 6 | 1 | 40.61 | 40.61 |
|  | 7.55×4.80 | 6 | 1 | 36.24 | 36.24 |
|  | 16.94×4.80 | 6 | 1 | 81.29 | 81.29 |
|  | 37.34×4.80 | 6 | 1 | 179.21 | 179.21 |
|  | 0.05×4.80 | 6 | 1 | 0.22 | 0.22 |
|  | 6.36×4.80 | 6 | 1 | 30.53 | 30.53 |
|  | 1.20×2.70 | 6 | 1 | 3.24 | 3.24 |
|  | 0.04×4.80 | 6 | 1 | 0.19 | 0.19 |
|  | 16.15×4.80 | 7 | 1 | 77.52 | 77.52 |
|  | 8.60×4.80 | 7 | 1 | 41.26 | 41.26 |
|  | 7.55×4.80 | 7 | 1 | 36.24 | 36.24 |
|  | 25.34×4.80 | 7 | 1 | 121.61 | 121.61 |
|  | 0.05×4.80 | 7 | 1 | 0.22 | 0.22 |
|  | 6.36×4.80 | 7 | 1 | 30.53 | 30.53 |
|  | 1.20×2.70 | 7 | 1 | 3.24 | 3.24 |
|  | 0.04×4.80 | 7 | 1 | 0.19 | 0.19 |
|  | 8.92×4.20 | 8 | 2 | 37.46 | 74.93 |
|  | 8.40×4.20 | 8 | 6 | 35.28 | 211.68 |
|  | 12.00×4.20 | 8 | 1 | 50.40 | 50.40 |
| C1515 | 1.50×1.50 | 1 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 1 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 2 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 4 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 5 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 6 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 7 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 8 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 8 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 9 | 3 | 2.25 | 6.75 |
| C1521 | 1.50×2.10 | 1 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 1 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 2 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 2 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 4 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 4 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 5 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 5 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 6 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 6 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 7 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 7 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 8 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 8 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 9 | 1 | 3.15 | 3.15 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| 北向 | 北-默认立面2275.91 |  | 11.10×5.10 | 1 | 1 | 56.61 | 56.61 |
|  | 0.65×4.80 | 2 | 1 | 3.10 | 3.10 |
|  | 1.50×2.20 | 2 | 1 | 3.30 | 3.30 |
|  | 0.60×4.80 | 2 | 1 | 2.88 | 2.88 |
|  | 1.41×4.80 | 2 | 1 | 6.76 | 6.76 |
|  | 0.98×4.80 | 2 | 1 | 4.70 | 4.70 |
|  | 1.80×2.70 | 2 | 1 | 4.86 | 4.86 |
|  | 0.41×4.80 | 2 | 1 | 1.96 | 1.96 |
|  | 2.67×4.80 | 2 | 1 | 12.82 | 12.82 |
|  | 2.00×4.80 | 2 | 1 | 9.60 | 9.60 |
|  | 1.50×2.20 | 2 | 1 | 3.30 | 3.30 |
|  | 4.79×4.80 | 2 | 1 | 22.99 | 22.99 |
|  | 16.94×3.80 | 3 | 1 | 64.35 | 64.35 |
|  | 3.27×3.80 | 3 | 1 | 12.42 | 12.42 |
|  | 8.41×3.80 | 3 | 1 | 31.94 | 31.94 |
|  | 8.40×3.80 | 3 | 1 | 31.92 | 31.92 |
|  | 25.72×3.80 | 3 | 1 | 97.74 | 97.74 |
|  | 8.46×3.80 | 3 | 1 | 32.15 | 32.15 |
|  | 0.02×5.80 | 4 | 1 | 0.12 | 0.12 |
|  | 1.20×3.70 | 4 | 1 | 4.44 | 4.44 |
|  | 6.38×5.80 | 4 | 1 | 37.00 | 37.00 |
|  | 7.75×5.80 | 4 | 1 | 44.95 | 44.95 |
|  | 3.28×5.80 | 4 | 1 | 19.00 | 19.00 |
|  | 4.20×5.80 | 4 | 1 | 24.36 | 24.36 |
|  | 4.66×5.80 | 4 | 1 | 27.03 | 27.03 |
|  | 0.14×5.80 | 4 | 1 | 0.78 | 0.78 |
|  | 8.46×5.80 | 4 | 1 | 49.07 | 49.07 |
|  | 17.72×5.80 | 4 | 1 | 102.78 | 102.78 |
|  | 7.55×5.80 | 4 | 1 | 43.79 | 43.79 |
|  | 8.46×5.80 | 4 | 1 | 49.07 | 49.07 |
|  | 8.54×4.80 | 5 | 1 | 40.97 | 40.97 |
|  | 0.05×4.80 | 5 | 1 | 0.22 | 0.22 |
|  | 8.46×4.80 | 5 | 1 | 40.61 | 40.61 |
|  | 0.14×4.80 | 5 | 1 | 0.65 | 0.65 |
|  | 3.90×4.80 | 5 | 1 | 18.70 | 18.70 |
|  | 4.20×4.80 | 5 | 1 | 20.16 | 20.16 |
|  | 4.06×4.80 | 5 | 1 | 19.49 | 19.49 |
|  | 17.72×4.80 | 5 | 1 | 85.06 | 85.06 |
|  | 8.46×4.80 | 5 | 1 | 40.61 | 40.61 |
|  | 8.25×4.80 | 5 | 1 | 39.58 | 39.58 |
|  | 0.02×4.80 | 6 | 1 | 0.10 | 0.10 |
|  | 1.20×2.70 | 6 | 1 | 3.24 | 3.24 |
|  | 6.38×4.80 | 6 | 1 | 30.62 | 30.62 |
|  | 28.80×4.80 | 6 | 1 | 138.24 | 138.24 |
|  | 0.05×4.80 | 6 | 1 | 0.22 | 0.22 |
|  | 0.05×4.80 | 6 | 1 | 0.22 | 0.22 |
|  | 17.26×4.80 | 6 | 1 | 82.85 | 82.85 |
|  | 17.26×4.80 | 6~7 | 2 | 82.85 | 165.70 |
|  | 7.55×4.80 | 6 | 1 | 36.24 | 36.24 |
|  | 8.46×4.80 | 6 | 1 | 40.61 | 40.61 |
|  | 0.02×4.80 | 7 | 1 | 0.10 | 0.10 |
|  | 1.20×2.70 | 7 | 1 | 3.24 | 3.24 |
|  | 6.38×4.80 | 7 | 1 | 30.62 | 30.62 |
|  | 8.08×4.80 | 7 | 1 | 38.76 | 38.76 |
|  | 16.48×4.80 | 7 | 1 | 79.08 | 79.08 |
|  | 8.08×4.80 | 7 | 1 | 38.76 | 38.76 |
|  | 0.04×4.80 | 7 | 1 | 0.17 | 0.17 |
|  | 0.05×4.80 | 7 | 1 | 0.22 | 0.22 |
|  | 7.55×4.80 | 7 | 1 | 36.24 | 36.24 |
|  | 8.40×4.20 | 8 | 6 | 35.28 | 211.68 |
|  | 12.00×4.20 | 8 | 1 | 50.40 | 50.40 |
|  | 8.92×4.20 | 8 | 2 | 37.46 | 74.93 |
| C0921 | 0.90×2.10 | 1 | 1 | 1.89 | 1.89 |
| C0921 | 0.90×2.10 | 2 | 1 | 1.89 | 1.89 |
| C0921 | 0.90×2.10 | 4 | 1 | 1.89 | 1.89 |
| C0921 | 0.90×2.10 | 5 | 1 | 1.89 | 1.89 |
| C0921 | 0.90×2.10 | 6 | 1 | 1.89 | 1.89 |
| C0921 | 0.90×2.10 | 7 | 1 | 1.89 | 1.89 |
| C0921 | 0.90×2.10 | 8 | 1 | 1.89 | 1.89 |
| C1515 | 1.50×1.50 | 1 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 2 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 2 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 4 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 5 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 6 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 7 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 8 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 9 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 9 | 1 | 2.25 | 2.25 |
| C1521 | 1.50×2.10 | 1 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 1 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 1 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 2 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 4 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 5 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 6 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 7 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 8 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 8 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 8 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 9 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 9 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 9 | 1 | 3.15 | 3.15 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| 东向 | 东-默认立面2117.50 |  | 11.10×5.10 | 1 | 1 | 56.61 | 56.61 |
|  | 3.40×4.80 | 2 | 1 | 16.30 | 16.30 |
|  | 4.20×2.20 | 2 | 1 | 9.24 | 9.24 |
|  | 3.61×4.80 | 2 | 1 | 17.30 | 17.30 |
|  | 1.80×4.80 | 2 | 1 | 8.64 | 8.64 |
|  | 4.20×2.20 | 2 | 1 | 9.24 | 9.24 |
|  | 2.54×4.80 | 2 | 1 | 12.19 | 12.19 |
|  | 5.30×4.80 | 2 | 1 | 25.46 | 25.46 |
|  | 8.50×4.80 | 2 | 1 | 40.80 | 40.80 |
|  | 0.14×3.80 | 3 | 1 | 0.51 | 0.51 |
|  | 8.46×3.80 | 3 | 1 | 32.15 | 32.15 |
|  | 8.54×3.80 | 3 | 1 | 32.43 | 32.43 |
|  | 28.80×3.80 | 3 | 1 | 109.44 | 109.44 |
|  | 8.40×3.80 | 3 | 1 | 31.92 | 31.92 |
|  | 7.75×5.80 | 4 | 1 | 44.95 | 44.95 |
|  | 16.15×5.80 | 4 | 1 | 93.67 | 93.67 |
|  | 0.14×5.80 | 4 | 1 | 0.78 | 0.78 |
|  | 8.46×5.80 | 4 | 1 | 49.07 | 49.07 |
|  | 8.46×5.80 | 4 | 1 | 49.07 | 49.07 |
|  | 7.60×5.80 | 4 | 1 | 44.08 | 44.08 |
|  | 7.50×5.80 | 4 | 1 | 43.50 | 43.50 |
|  | 8.54×5.80 | 4 | 1 | 49.50 | 49.50 |
|  | 0.05×4.80 | 5 | 1 | 0.22 | 0.22 |
|  | 8.46×4.80 | 5 | 1 | 40.61 | 40.61 |
|  | 26.12×4.80 | 5 | 1 | 125.38 | 125.38 |
|  | 8.46×4.80 | 5 | 1 | 40.61 | 40.61 |
|  | 26.12×4.80 | 5 | 1 | 125.38 | 125.38 |
|  | 8.54×4.80 | 6 | 2 | 40.97 | 81.94 |
|  | 8.54×4.80 | 6 | 1 | 40.97 | 40.97 |
|  | 0.05×4.80 | 6 | 1 | 0.22 | 0.22 |
|  | 8.46×4.80 | 6 | 1 | 40.61 | 40.61 |
|  | 7.60×4.80 | 6 | 1 | 36.48 | 36.48 |
|  | 7.50×4.80 | 6 | 1 | 36.00 | 36.00 |
|  | 8.53×4.80 | 6 | 1 | 40.97 | 40.97 |
|  | 0.05×4.80 | 7 | 1 | 0.22 | 0.22 |
|  | 8.55×4.80 | 7 | 1 | 41.06 | 41.06 |
|  | 17.41×4.80 | 7 | 1 | 83.57 | 83.57 |
|  | 37.36×4.80 | 7 | 1 | 179.30 | 179.30 |
|  | 7.60×4.80 | 7 | 1 | 36.48 | 36.48 |
|  | 7.50×4.80 | 7 | 1 | 36.00 | 36.00 |
|  | 8.40×4.20 | 8 | 6 | 35.28 | 211.68 |
|  | 8.92×4.20 | 8 | 2 | 37.46 | 74.93 |
|  | 12.00×4.20 | 8 | 1 | 50.40 | 50.40 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| C2121 | 2.10×2.10 | 1 | 1 | 4.41 | 4.41 |
| 西向 | 西-默认立面2053.88 |  | 11.10×5.10 | 1 | 1 | 56.61 | 56.61 |
|  | 0.50×4.80 | 2 | 1 | 2.38 | 2.38 |
|  | 4.10×4.80 | 2 | 2 | 19.69 | 39.39 |
|  | 1.98×4.80 | 2 | 1 | 9.52 | 9.52 |
|  | 1.80×2.70 | 2 | 1 | 4.86 | 4.86 |
|  | 0.32×4.80 | 2 | 1 | 1.53 | 1.53 |
|  | 4.02×4.80 | 2 | 1 | 19.28 | 19.28 |
|  | 8.08×4.80 | 2 | 1 | 38.78 | 38.78 |
|  | 3.30×4.80 | 2 | 2 | 15.84 | 31.69 |
|  | 5.50×4.80 | 2 | 1 | 26.40 | 26.40 |
|  | 0.03×4.80 | 2 | 1 | 0.12 | 0.12 |
|  | 1.80×2.70 | 2 | 1 | 4.86 | 4.86 |
|  | 2.15×4.80 | 2 | 1 | 10.30 | 10.30 |
|  | 4.21×4.80 | 2 | 1 | 20.19 | 20.19 |
|  | 3.92×4.80 | 2 | 1 | 18.80 | 18.80 |
|  | 3.02×4.80 | 2 | 2 | 14.49 | 28.97 |
|  | 8.46×3.80 | 3 | 1 | 32.15 | 32.15 |
|  | 8.54×3.80 | 3 | 1 | 32.43 | 32.43 |
|  | 17.00×3.80 | 3 | 1 | 64.58 | 64.58 |
|  | 26.12×3.80 | 3 | 1 | 99.26 | 99.26 |
|  | 8.53×5.80 | 4 | 1 | 49.50 | 49.50 |
|  | 7.75×5.80 | 4 | 1 | 44.95 | 44.95 |
|  | 8.46×5.80 | 4 | 1 | 49.07 | 49.07 |
|  | 7.73×5.80 | 4 | 1 | 44.81 | 44.81 |
|  | 25.33×5.80 | 4 | 1 | 146.94 | 146.94 |
|  | 0.14×4.80 | 5 | 1 | 0.65 | 0.65 |
|  | 8.46×4.80 | 5 | 1 | 40.61 | 40.61 |
|  | 16.94×4.80 | 5 | 1 | 81.29 | 81.29 |
|  | 0.14×4.80 | 5 | 1 | 0.65 | 0.65 |
|  | 16.93×4.80 | 5 | 1 | 81.28 | 81.28 |
|  | 19.75×4.80 | 6 | 1 | 94.80 | 94.80 |
|  | 8.53×4.80 | 6 | 1 | 40.96 | 40.96 |
|  | 8.46×4.80 | 6~7 | 2 | 40.61 | 81.22 |
|  | 16.94×4.80 | 6 | 1 | 81.29 | 81.29 |
|  | 7.73×4.80 | 6 | 1 | 37.08 | 37.08 |
|  | 28.93×4.80 | 7 | 1 | 138.88 | 138.88 |
|  | 9.32×4.80 | 7 | 1 | 44.74 | 44.74 |
|  | 8.54×4.80 | 7 | 1 | 40.97 | 40.97 |
|  | 0.05×4.80 | 7 | 1 | 0.22 | 0.22 |
|  | 7.73×4.80 | 7 | 1 | 37.08 | 37.08 |
|  | 12.00×4.20 | 8 | 1 | 50.40 | 50.40 |
|  | 8.40×4.20 | 8 | 6 | 35.28 | 211.68 |
|  | 8.92×4.20 | 8 | 2 | 37.46 | 74.93 |
| C1515 | 1.50×1.50 | 1 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 2 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 4 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 5 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 6 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 7 | 1 | 2.25 | 2.25 |
| C1515 | 1.50×1.50 | 8 | 1 | 2.25 | 2.25 |
| C1521 | 1.50×2.10 | 1 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 2 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 4 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 5 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 6 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 7 | 1 | 3.15 | 3.15 |
| C1521 | 1.50×2.10 | 8 | 1 | 3.15 | 3.15 |

## 可见光透射比

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 朝向 | 立面 | 窗墙比 | 最不利窗编号 | 最不利透射比 | 透射比限值 |
| 南向 | 南-默认立面 | 0.63 | C1515 | 0.80 | 0.40 |
| 北向 | 北-默认立面 | 0.64 | C1521 | 0.80 | 0.40 |
| 东向 | 东-默认立面 | 0.75 | C2121 | 0.80 | 0.40 |
| 西向 | 西-默认立面 | 0.75 | C1521 | 0.80 | 0.40 |

## 天窗

### 天窗屋顶比

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 房间 | 天窗编号 | 天窗面积（㎡） | 屋顶面积（㎡） | 面积比 |
| A8003 | TC1, | 486.20 | 490.62 | 0.99 |
| 整栋建筑 | 486.20 | 13021.79 | 0.04 |

### 天窗类型

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 序号 | 构造名称 | 构造编号 | 传热系数 | 自遮阳系数 | 备注 |
| 1 | 12A钢铝单框双玻窗（平均） | 66 | 3.90 | 0.75 | 来源《民用建筑热工设计规范》 |
| 平均 |  | 3.90 | 0.69 |  |

## 屋顶构造

### 上人屋面

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料名称（由上到下） | 厚度δ | 导热系数λ | 蓄热系数S | 修正系数 | 热阻R | 热惰性指标 |
| (mm) | W/(m.K) | W/(㎡.K) | α | (㎡K)/W | D=R\*S |
| 砾石、石灰岩 | 20 | 2.040 | 18.099 | 1.00 | 0.010 | 0.177 |
| 水泥砂浆 | 20 | 0.930 | 11.306 | 1.00 | 0.022 | 0.243 |
| 石油沥青(ρ=1400) | 6 | 0.270 | 6.796 | 1.00 | 0.022 | 0.151 |
| 水泥砂浆 | 20 | 0.930 | 11.306 | 1.00 | 0.022 | 0.243 |
| 加气混凝土、泡沫混凝土(ρ=700) | 20 | 0.220 | 3.429 | 1.00 | 0.091 | 0.312 |
| 加气混凝土砌体 | 150 | 0.220 | 3.601 | 1.00 | 0.682 | 2.455 |
| 钢筋混凝土 | 100 | 1.740 | 17.060 | 1.00 | 0.057 | 0.980 |
| 各层之和∑ | 336 | － | － | － | 0.905 | 4.562 |
| 外表面太阳辐射吸收系数 | 0.75[默认] |
| 传热系数K=1/(0.16+∑R) | 0.94 |

## 外墙构造

### 外墙相关构造

#### 外墙构造二

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料名称（由外到内） | 厚度δ | 导热系数λ | 蓄热系数S | 修正系数 | 热阻R | 热惰性指标 |
| (mm) | W/(m.K) | W/(㎡.K) | α | (㎡K)/W | D=R\*S |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 水泥砂浆 | 23 | 0.930 | 11.306 | 1.00 | 0.025 | 0.280 |
| 水泥砂浆 | 15 | 0.930 | 11.306 | 1.00 | 0.016 | 0.182 |
| 碎石、卵石混凝土(ρ=2300) | 10 | 1.510 | 15.360 | 1.00 | 0.007 | 0.102 |
| 水泥砂浆 | 30 | 0.930 | 11.306 | 1.00 | 0.032 | 0.365 |
| 花岗岩、玄武岩 | 30 | 3.490 | 25.569 | 1.00 | 0.009 | 0.220 |
| 水泥砂浆 | 20 | 0.930 | 11.306 | 1.00 | 0.022 | 0.243 |
| 花岗岩、玄武岩 | 60 | 3.490 | 25.569 | 1.00 | 0.017 | 0.440 |
| 各层之和∑ | 208 | － | － | － | 0.149 | 2.075 |
| 外表面太阳辐射吸收系数 | 0.75[默认] |
| 传热系数K=1/(0.16+∑R) | 3.24 |

#### 热桥柱构造一

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料名称（由外到内） | 厚度δ | 导热系数λ | 蓄热系数S | 修正系数 | 热阻R | 热惰性指标 |
| (mm) | W/(m.K) | W/(㎡.K) | α | (㎡K)/W | D=R\*S |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 挤塑聚苯乙烯泡沫塑料（带表皮） | 20 | 0.030 | 0.340 | 1.20 | 0.556 | 0.227 |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 钢筋混凝土 | 200 | 1.740 | 17.200 | 1.00 | 0.115 | 1.977 |
| 石灰砂浆 | 20 | 0.810 | 10.070 | 1.00 | 0.025 | 0.249 |
| 各层之和∑ | 280 | － | － | － | 0.738 | 2.941 |
| 外表面太阳辐射吸收系数 | 0.75[默认] |
| 传热系数K=1/(0.16+∑R) | 1.11 |

### 外墙主断面传热系数的修正系数ψ

### 外墙平均热工特性

1.　南向

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 构造名称 | 构件类型 | 面积(㎡) | 面积所占比例 | 传热系数KW / (㎡K) | 热惰性指标D | 太阳辐射吸收系数 |
| 外墙构造二 | 主墙体 | 1197.61 | 1.000 | 3.24 | 2.08 | 0.75 |
| 考虑线性热桥后K | 3.24 × 1.00 = 3.24 |

2.　北向

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 构造名称 | 构件类型 | 面积(㎡) | 面积所占比例 | 传热系数KW / (㎡K) | 热惰性指标D | 太阳辐射吸收系数 |
| 外墙构造二 | 主墙体 | 1230.87 | 1.000 | 3.24 | 2.08 | 0.75 |
| 考虑线性热桥后K | 3.24 × 1.00 = 3.24 |

3.　东向

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 构造名称 | 构件类型 | 面积(㎡) | 面积所占比例 | 传热系数KW / (㎡K) | 热惰性指标D | 太阳辐射吸收系数 |
| 外墙构造二 | 主墙体 | 696.14 | 1.000 | 3.24 | 2.08 | 0.75 |
| 考虑线性热桥后K | 3.24 × 1.00 = 3.24 |

4.　西向

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 构造名称 | 构件类型 | 面积(㎡) | 面积所占比例 | 传热系数KW / (㎡K) | 热惰性指标D | 太阳辐射吸收系数 |
| 外墙构造二 | 主墙体 | 667.81 | 1.000 | 3.24 | 2.08 | 0.75 |
| 考虑线性热桥后K | 3.24 × 1.00 = 3.24 |

5.　总体

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 构造名称 | 构件类型 | 面积(㎡) | 面积所占比例 | 传热系数KW / (㎡K) | 热惰性指标D | 太阳辐射吸收系数 |
| 外墙构造二 | 主墙体 | 3792.43 | 1.000 | 3.24 | 2.08 | 0.75 |
| 考虑线性热桥后K | 3.24 × 1.00 = 3.24 |

## 挑空楼板构造

### 挑空楼板构造一

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料名称（由上到下） | 厚度δ | 导热系数λ | 蓄热系数S | 修正系数 | 热阻R | 热惰性指标 |
| (mm) | W/(m.K) | W/(㎡.K) | α | (㎡K)/W | D=R\*S |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 钢筋混凝土 | 120 | 1.740 | 17.200 | 1.00 | 0.069 | 1.186 |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 挤塑聚苯乙烯泡沫塑料（带表皮） | 20 | 0.030 | 0.340 | 1.20 | 0.556 | 0.227 |
| 水泥砂浆 | 20 | 0.930 | 11.370 | 1.00 | 0.022 | 0.245 |
| 各层之和∑ | 200 | － | － | － | 0.689 | 2.146 |
| 传热系数K=1/(0.16+∑R) | 1.18 |

## 外窗热工

### 外窗构造

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 序号 | 构造名称 | 构造编号 | 传热系数 | 太阳得热系数 | 可见光透射比 | 备注 |
| 1 | 断热铝合金窗+无色透明中空玻璃 | 65 | 3.00 | 0.61 | 1.000 |  |
| 2 | 普通铝合金窗+透明玻璃（5~6mm） | 18 | 6.00 | 0.74 | 0.800 |  |

### 外遮阳类型

已启用环境遮阳

### 平均传热系数

1. 南向：

南-默认立面

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 传热系数 |
| 1 |  | 1 | 1 | 56.610 | 56.610 | 65 | 3.000 |
| 2 |  | 2 | 1 | 14.438 | 14.438 | 65 | 3.000 |
| 3 |  | 2 | 1 | 4.860 | 4.860 | 65 | 3.000 |
| 4 |  | 2 | 1 | 0.398 | 0.398 | 65 | 3.000 |
| 5 |  | 2 | 2 | 14.222 | 28.444 | 65 | 3.000 |
| 6 |  | 2 | 2 | 31.181 | 62.362 | 65 | 3.000 |
| 7 |  | 2 | 1 | 15.245 | 15.245 | 65 | 3.000 |
| 8 |  | 2 | 1 | 9.240 | 9.240 | 65 | 3.000 |
| 9 |  | 2 | 1 | 17.866 | 17.866 | 65 | 3.000 |
| 10 |  | 3 | 1 | 24.833 | 24.833 | 65 | 3.000 |
| 11 |  | 3 | 1 | 32.661 | 32.661 | 65 | 3.000 |
| 12 |  | 3 | 1 | 0.513 | 0.513 | 65 | 3.000 |
| 13 |  | 3 | 1 | 32.148 | 32.148 | 65 | 3.000 |
| 14 |  | 3 | 1 | 28.709 | 28.709 | 65 | 3.000 |
| 15 |  | 3 | 1 | 32.148 | 32.148 | 65 | 3.000 |
| 16 |  | 4 | 1 | 0.348 | 0.348 | 65 | 3.000 |
| 17 |  | 4 | 1 | 98.223 | 98.223 | 65 | 3.000 |
| 18 |  | 4 | 1 | 0.783 | 0.783 | 65 | 3.000 |
| 19 |  | 4 | 1 | 49.068 | 49.068 | 65 | 3.000 |
| 20 |  | 4 | 1 | 70.383 | 70.383 | 65 | 3.000 |
| 21 |  | 4 | 1 | 43.442 | 43.442 | 65 | 3.000 |
| 22 |  | 4 | 1 | 49.503 | 49.503 | 65 | 3.000 |
| 23 |  | 4 | 1 | 36.888 | 36.888 | 65 | 3.000 |
| 24 |  | 4 | 1 | 4.440 | 4.440 | 65 | 3.000 |
| 25 |  | 4 | 1 | 0.232 | 0.232 | 65 | 3.000 |
| 26 |  | 5 | 1 | 40.968 | 40.968 | 65 | 3.000 |
| 27 |  | 5 | 1 | 40.608 | 40.608 | 65 | 3.000 |
| 28 |  | 5 | 1 | 98.568 | 98.568 | 65 | 3.000 |
| 29 |  | 5 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 30 |  | 5 | 1 | 85.056 | 85.056 | 65 | 3.000 |
| 31 |  | 5 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 32 |  | 6 | 1 | 40.608 | 40.608 | 65 | 3.000 |
| 33 |  | 6 | 1 | 36.240 | 36.240 | 65 | 3.000 |
| 34 |  | 6 | 1 | 81.288 | 81.288 | 65 | 3.000 |
| 35 |  | 6 | 1 | 179.208 | 179.208 | 65 | 3.000 |
| 36 |  | 6 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 37 |  | 6 | 1 | 30.528 | 30.528 | 65 | 3.000 |
| 38 |  | 6 | 1 | 3.240 | 3.240 | 65 | 3.000 |
| 39 |  | 6 | 1 | 0.192 | 0.192 | 65 | 3.000 |
| 40 |  | 7 | 1 | 77.520 | 77.520 | 65 | 3.000 |
| 41 |  | 7 | 1 | 41.256 | 41.256 | 65 | 3.000 |
| 42 |  | 7 | 1 | 36.240 | 36.240 | 65 | 3.000 |
| 43 |  | 7 | 1 | 121.608 | 121.608 | 65 | 3.000 |
| 44 |  | 7 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 45 |  | 7 | 1 | 30.528 | 30.528 | 65 | 3.000 |
| 46 |  | 7 | 1 | 3.240 | 3.240 | 65 | 3.000 |
| 47 |  | 7 | 1 | 0.192 | 0.192 | 65 | 3.000 |
| 48 |  | 8 | 2 | 37.464 | 74.928 | 65 | 3.000 |
| 49 |  | 8 | 6 | 35.280 | 211.680 | 65 | 3.000 |
| 50 |  | 8 | 1 | 50.400 | 50.400 | 65 | 3.000 |
| 51 | C1515 | 1 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 52 | C1515 | 1 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 53 | C1515 | 2 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 54 | C1515 | 4 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 55 | C1515 | 5 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 56 | C1515 | 6 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 57 | C1515 | 7 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 58 | C1515 | 8 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 59 | C1515 | 8 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 60 | C1515 | 9 | 3 | 2.250 | 6.750 | 18 | 6.000 |
| 61 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 62 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 63 | C1521 | 2 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 64 | C1521 | 2 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 65 | C1521 | 4 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 66 | C1521 | 4 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 67 | C1521 | 5 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 68 | C1521 | 5 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 69 | C1521 | 6 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 70 | C1521 | 6 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 71 | C1521 | 7 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 72 | C1521 | 7 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 73 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 74 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 75 | C1521 | 9 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 76 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 77 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 78 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 79 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 80 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 81 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 82 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 83 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 立面总面积(㎡) | 2108.275 | 立面平均传热系数 | 3.156 |

2. 北向：

北-默认立面

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 传热系数 |
| 1 |  | 1 | 1 | 56.610 | 56.610 | 65 | 3.000 |
| 2 |  | 2 | 1 | 3.096 | 3.096 | 65 | 3.000 |
| 3 |  | 2 | 1 | 3.300 | 3.300 | 65 | 3.000 |
| 4 |  | 2 | 1 | 2.880 | 2.880 | 65 | 3.000 |
| 5 |  | 2 | 1 | 6.759 | 6.759 | 65 | 3.000 |
| 6 |  | 2 | 1 | 4.704 | 4.704 | 65 | 3.000 |
| 7 |  | 2 | 1 | 4.860 | 4.860 | 65 | 3.000 |
| 8 |  | 2 | 1 | 1.963 | 1.963 | 65 | 3.000 |
| 9 |  | 2 | 1 | 12.821 | 12.821 | 65 | 3.000 |
| 10 |  | 2 | 1 | 9.600 | 9.600 | 65 | 3.000 |
| 11 |  | 2 | 1 | 3.300 | 3.300 | 65 | 3.000 |
| 12 |  | 2 | 1 | 22.992 | 22.992 | 65 | 3.000 |
| 13 |  | 3 | 1 | 64.353 | 64.353 | 65 | 3.000 |
| 14 |  | 3 | 1 | 12.424 | 12.424 | 65 | 3.000 |
| 15 |  | 3 | 1 | 31.941 | 31.941 | 65 | 3.000 |
| 16 |  | 3 | 1 | 31.920 | 31.920 | 65 | 3.000 |
| 17 |  | 3 | 1 | 97.736 | 97.736 | 65 | 3.000 |
| 18 |  | 3 | 1 | 32.148 | 32.148 | 65 | 3.000 |
| 19 |  | 4 | 1 | 0.116 | 0.116 | 65 | 3.000 |
| 20 |  | 4 | 1 | 4.440 | 4.440 | 65 | 3.000 |
| 21 |  | 4 | 1 | 37.004 | 37.004 | 65 | 3.000 |
| 22 |  | 4 | 1 | 44.950 | 44.950 | 65 | 3.000 |
| 23 |  | 4 | 1 | 18.995 | 18.995 | 65 | 3.000 |
| 24 |  | 4 | 1 | 24.360 | 24.360 | 65 | 3.000 |
| 25 |  | 4 | 1 | 27.028 | 27.028 | 65 | 3.000 |
| 26 |  | 4 | 1 | 0.783 | 0.783 | 65 | 3.000 |
| 27 |  | 4 | 1 | 49.068 | 49.068 | 65 | 3.000 |
| 28 |  | 4 | 1 | 102.776 | 102.776 | 65 | 3.000 |
| 29 |  | 4 | 1 | 43.790 | 43.790 | 65 | 3.000 |
| 30 |  | 4 | 1 | 49.068 | 49.068 | 65 | 3.000 |
| 31 |  | 5 | 1 | 40.968 | 40.968 | 65 | 3.000 |
| 32 |  | 5 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 33 |  | 5 | 1 | 40.608 | 40.608 | 65 | 3.000 |
| 34 |  | 5 | 1 | 0.648 | 0.648 | 65 | 3.000 |
| 35 |  | 5 | 1 | 18.696 | 18.696 | 65 | 3.000 |
| 36 |  | 5 | 1 | 20.160 | 20.160 | 65 | 3.000 |
| 37 |  | 5 | 1 | 19.488 | 19.488 | 65 | 3.000 |
| 38 |  | 5 | 1 | 85.056 | 85.056 | 65 | 3.000 |
| 39 |  | 5 | 1 | 40.608 | 40.608 | 65 | 3.000 |
| 40 |  | 5 | 1 | 39.576 | 39.576 | 65 | 3.000 |
| 41 |  | 6 | 1 | 0.096 | 0.096 | 65 | 3.000 |
| 42 |  | 6 | 1 | 3.240 | 3.240 | 65 | 3.000 |
| 43 |  | 6 | 1 | 30.624 | 30.624 | 65 | 3.000 |
| 44 |  | 6 | 1 | 138.240 | 138.240 | 65 | 3.000 |
| 45 |  | 6 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 46 |  | 6 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 47 |  | 6 | 1 | 82.848 | 82.848 | 65 | 3.000 |
| 48 |  | 6~7 | 2 | 82.848 | 165.696 | 65 | 3.000 |
| 49 |  | 6 | 1 | 36.240 | 36.240 | 65 | 3.000 |
| 50 |  | 6 | 1 | 40.608 | 40.608 | 65 | 3.000 |
| 51 |  | 7 | 1 | 0.096 | 0.096 | 65 | 3.000 |
| 52 |  | 7 | 1 | 3.240 | 3.240 | 65 | 3.000 |
| 53 |  | 7 | 1 | 30.624 | 30.624 | 65 | 3.000 |
| 54 |  | 7 | 1 | 38.760 | 38.760 | 65 | 3.000 |
| 55 |  | 7 | 1 | 79.080 | 79.080 | 65 | 3.000 |
| 56 |  | 7 | 1 | 38.760 | 38.760 | 65 | 3.000 |
| 57 |  | 7 | 1 | 0.168 | 0.168 | 65 | 3.000 |
| 58 |  | 7 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 59 |  | 7 | 1 | 36.240 | 36.240 | 65 | 3.000 |
| 60 |  | 8 | 6 | 35.280 | 211.680 | 65 | 3.000 |
| 61 |  | 8 | 1 | 50.400 | 50.400 | 65 | 3.000 |
| 62 |  | 8 | 2 | 37.464 | 74.928 | 65 | 3.000 |
| 63 | C0921 | 1 | 1 | 1.890 | 1.890 | 18 | 6.000 |
| 64 | C0921 | 2 | 1 | 1.890 | 1.890 | 18 | 6.000 |
| 65 | C0921 | 4 | 1 | 1.890 | 1.890 | 18 | 6.000 |
| 66 | C0921 | 5 | 1 | 1.890 | 1.890 | 18 | 6.000 |
| 67 | C0921 | 6 | 1 | 1.890 | 1.890 | 18 | 6.000 |
| 68 | C0921 | 7 | 1 | 1.890 | 1.890 | 18 | 6.000 |
| 69 | C0921 | 8 | 1 | 1.890 | 1.890 | 18 | 6.000 |
| 70 | C1515 | 1 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 71 | C1515 | 2 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 72 | C1515 | 2 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 73 | C1515 | 4 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 74 | C1515 | 5 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 75 | C1515 | 6 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 76 | C1515 | 7 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 77 | C1515 | 8 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 78 | C1515 | 9 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 79 | C1515 | 9 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 80 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 81 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 82 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 83 | C1521 | 2 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 84 | C1521 | 4 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 85 | C1521 | 5 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 86 | C1521 | 6 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 87 | C1521 | 7 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 88 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 89 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 90 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 91 | C1521 | 9 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 92 | C1521 | 9 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 93 | C1521 | 9 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 94 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 95 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 96 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 97 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 98 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 立面总面积(㎡) | 2275.906 | 立面平均传热系数 | 3.134 |

3. 东向：

东-默认立面

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 传热系数 |
| 1 |  | 1 | 1 | 56.610 | 56.610 | 65 | 3.000 |
| 2 |  | 2 | 1 | 16.296 | 16.296 | 65 | 3.000 |
| 3 |  | 2 | 1 | 9.240 | 9.240 | 65 | 3.000 |
| 4 |  | 2 | 1 | 17.304 | 17.304 | 65 | 3.000 |
| 5 |  | 2 | 1 | 8.640 | 8.640 | 65 | 3.000 |
| 6 |  | 2 | 1 | 9.240 | 9.240 | 65 | 3.000 |
| 7 |  | 2 | 1 | 12.192 | 12.192 | 65 | 3.000 |
| 8 |  | 2 | 1 | 25.462 | 25.462 | 65 | 3.000 |
| 9 |  | 2 | 1 | 40.800 | 40.800 | 65 | 3.000 |
| 10 |  | 3 | 1 | 0.513 | 0.513 | 65 | 3.000 |
| 11 |  | 3 | 1 | 32.148 | 32.148 | 65 | 3.000 |
| 12 |  | 3 | 1 | 32.433 | 32.433 | 65 | 3.000 |
| 13 |  | 3 | 1 | 109.440 | 109.440 | 65 | 3.000 |
| 14 |  | 3 | 1 | 31.920 | 31.920 | 65 | 3.000 |
| 15 |  | 4 | 1 | 44.950 | 44.950 | 65 | 3.000 |
| 16 |  | 4 | 1 | 93.670 | 93.670 | 65 | 3.000 |
| 17 |  | 4 | 1 | 0.783 | 0.783 | 65 | 3.000 |
| 18 |  | 4 | 1 | 49.068 | 49.068 | 65 | 3.000 |
| 19 |  | 4 | 1 | 49.068 | 49.068 | 65 | 3.000 |
| 20 |  | 4 | 1 | 44.080 | 44.080 | 65 | 3.000 |
| 21 |  | 4 | 1 | 43.500 | 43.500 | 65 | 3.000 |
| 22 |  | 4 | 1 | 49.503 | 49.503 | 65 | 3.000 |
| 23 |  | 5 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 24 |  | 5 | 1 | 40.608 | 40.608 | 65 | 3.000 |
| 25 |  | 5 | 1 | 125.376 | 125.376 | 65 | 3.000 |
| 26 |  | 5 | 1 | 40.608 | 40.608 | 65 | 3.000 |
| 27 |  | 5 | 1 | 125.376 | 125.376 | 65 | 3.000 |
| 28 |  | 6 | 2 | 40.968 | 81.936 | 65 | 3.000 |
| 29 |  | 6 | 1 | 40.968 | 40.968 | 65 | 3.000 |
| 30 |  | 6 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 31 |  | 6 | 1 | 40.608 | 40.608 | 65 | 3.000 |
| 32 |  | 6 | 1 | 36.480 | 36.480 | 65 | 3.000 |
| 33 |  | 6 | 1 | 36.000 | 36.000 | 65 | 3.000 |
| 34 |  | 6 | 1 | 40.968 | 40.968 | 65 | 3.000 |
| 35 |  | 7 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 36 |  | 7 | 1 | 41.064 | 41.064 | 65 | 3.000 |
| 37 |  | 7 | 1 | 83.568 | 83.568 | 65 | 3.000 |
| 38 |  | 7 | 1 | 179.304 | 179.304 | 65 | 3.000 |
| 39 |  | 7 | 1 | 36.480 | 36.480 | 65 | 3.000 |
| 40 |  | 7 | 1 | 36.000 | 36.000 | 65 | 3.000 |
| 41 |  | 8 | 6 | 35.280 | 211.680 | 65 | 3.000 |
| 42 |  | 8 | 2 | 37.464 | 74.928 | 65 | 3.000 |
| 43 |  | 8 | 1 | 50.400 | 50.400 | 65 | 3.000 |
| 44 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 45 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 46 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 47 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 6.000 |
| 立面总面积(㎡) | 2117.500 | 立面平均传热系数 | 3.025 |

4. 西向：

西-默认立面

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 传热系数 |
| 1 |  | 1 | 1 | 56.610 | 56.610 | 65 | 3.000 |
| 2 |  | 2 | 1 | 2.376 | 2.376 | 65 | 3.000 |
| 3 |  | 2 | 2 | 19.694 | 39.389 | 65 | 3.000 |
| 4 |  | 2 | 1 | 9.523 | 9.523 | 65 | 3.000 |
| 5 |  | 2 | 1 | 4.860 | 4.860 | 65 | 3.000 |
| 6 |  | 2 | 1 | 1.531 | 1.531 | 65 | 3.000 |
| 7 |  | 2 | 1 | 19.277 | 19.277 | 65 | 3.000 |
| 8 |  | 2 | 1 | 38.785 | 38.785 | 65 | 3.000 |
| 9 |  | 2 | 2 | 15.845 | 31.690 | 65 | 3.000 |
| 10 |  | 2 | 1 | 26.396 | 26.396 | 65 | 3.000 |
| 11 |  | 2 | 1 | 0.120 | 0.120 | 65 | 3.000 |
| 12 |  | 2 | 1 | 4.860 | 4.860 | 65 | 3.000 |
| 13 |  | 2 | 1 | 10.296 | 10.296 | 65 | 3.000 |
| 14 |  | 2 | 1 | 20.187 | 20.187 | 65 | 3.000 |
| 15 |  | 2 | 1 | 18.795 | 18.795 | 65 | 3.000 |
| 16 |  | 2 | 2 | 14.486 | 28.972 | 65 | 3.000 |
| 17 |  | 3 | 1 | 32.148 | 32.148 | 65 | 3.000 |
| 18 |  | 3 | 1 | 32.433 | 32.433 | 65 | 3.000 |
| 19 |  | 3 | 1 | 64.581 | 64.581 | 65 | 3.000 |
| 20 |  | 3 | 1 | 99.256 | 99.256 | 65 | 3.000 |
| 21 |  | 4 | 1 | 49.503 | 49.503 | 65 | 3.000 |
| 22 |  | 4 | 1 | 44.950 | 44.950 | 65 | 3.000 |
| 23 |  | 4 | 1 | 49.068 | 49.068 | 65 | 3.000 |
| 24 |  | 4 | 1 | 44.805 | 44.805 | 65 | 3.000 |
| 25 |  | 4 | 1 | 146.943 | 146.943 | 65 | 3.000 |
| 26 |  | 5 | 1 | 0.651 | 0.651 | 65 | 3.000 |
| 27 |  | 5 | 1 | 40.608 | 40.608 | 65 | 3.000 |
| 28 |  | 5 | 1 | 81.288 | 81.288 | 65 | 3.000 |
| 29 |  | 5 | 1 | 0.648 | 0.648 | 65 | 3.000 |
| 30 |  | 5 | 1 | 81.282 | 81.282 | 65 | 3.000 |
| 31 |  | 6 | 1 | 94.800 | 94.800 | 65 | 3.000 |
| 32 |  | 6 | 1 | 40.962 | 40.962 | 65 | 3.000 |
| 33 |  | 6~7 | 2 | 40.608 | 81.216 | 65 | 3.000 |
| 34 |  | 6 | 1 | 81.294 | 81.294 | 65 | 3.000 |
| 35 |  | 6 | 1 | 37.080 | 37.080 | 65 | 3.000 |
| 36 |  | 7 | 1 | 138.882 | 138.882 | 65 | 3.000 |
| 37 |  | 7 | 1 | 44.736 | 44.736 | 65 | 3.000 |
| 38 |  | 7 | 1 | 40.975 | 40.975 | 65 | 3.000 |
| 39 |  | 7 | 1 | 0.216 | 0.216 | 65 | 3.000 |
| 40 |  | 7 | 1 | 37.080 | 37.080 | 65 | 3.000 |
| 41 |  | 8 | 1 | 50.400 | 50.400 | 65 | 3.000 |
| 42 |  | 8 | 6 | 35.280 | 211.680 | 65 | 3.000 |
| 43 |  | 8 | 2 | 37.464 | 74.928 | 65 | 3.000 |
| 44 | C1515 | 1 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 45 | C1515 | 2 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 46 | C1515 | 4 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 47 | C1515 | 5 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 48 | C1515 | 6 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 49 | C1515 | 7 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 50 | C1515 | 8 | 1 | 2.250 | 2.250 | 18 | 6.000 |
| 51 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 52 | C1521 | 2 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 53 | C1521 | 4 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 54 | C1521 | 5 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 55 | C1521 | 6 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 56 | C1521 | 7 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 57 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 6.000 |
| 立面总面积(㎡) | 2053.880 | 立面平均传热系数 | 3.055 |

### 综合太阳得热系数

1. 南向：

南-默认立面

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 窗太阳得热系数 | 外遮阳编号 | 外遮阳系数(含环境遮阳) | 综合太阳得热系数 |
| 1 |  | 1 | 1 | 56.610 | 56.610 | 65 | 0.609 |  | 0.014 | 0.009 |
| 2 |  | 2 | 1 | 14.438 | 14.438 | 65 | 0.609 |  | 0.168 | 0.102 |
| 3 |  | 2 | 1 | 4.860 | 4.860 | 65 | 0.609 |  | 0.168 | 0.102 |
| 4 |  | 2 | 1 | 0.398 | 0.398 | 65 | 0.609 |  | 0.168 | 0.102 |
| 5 |  | 2 | 2 | 14.222 | 28.444 | 65 | 0.609 |  | 0.241 | 0.147 |
| 6 |  | 2 | 2 | 31.181 | 62.362 | 65 | 0.609 |  | 0.352 | 0.214 |
| 7 |  | 2 | 1 | 15.245 | 15.245 | 65 | 0.609 |  | 0.137 | 0.083 |
| 8 |  | 2 | 1 | 9.240 | 9.240 | 65 | 0.609 |  | 0.137 | 0.083 |
| 9 |  | 2 | 1 | 17.866 | 17.866 | 65 | 0.609 |  | 0.137 | 0.083 |
| 10 |  | 3 | 1 | 24.833 | 24.833 | 65 | 0.609 |  | 0.051 | 0.031 |
| 11 |  | 3 | 1 | 32.661 | 32.661 | 65 | 0.609 |  | 0.941 | 0.573 |
| 12 |  | 3 | 1 | 0.513 | 0.513 | 65 | 0.609 |  | 0.867 | 0.528 |
| 13 |  | 3 | 1 | 32.148 | 32.148 | 65 | 0.609 |  | 0.167 | 0.102 |
| 14 |  | 3 | 1 | 28.709 | 28.709 | 65 | 0.609 |  | 0.120 | 0.073 |
| 15 |  | 3 | 1 | 32.148 | 32.148 | 65 | 0.609 |  | 0.985 | 0.600 |
| 16 |  | 4 | 1 | 0.348 | 0.348 | 65 | 0.609 |  | 0.161 | 0.098 |
| 17 |  | 4 | 1 | 98.223 | 98.223 | 65 | 0.609 |  | 0.892 | 0.543 |
| 18 |  | 4 | 1 | 0.783 | 0.783 | 65 | 0.609 |  | 0.907 | 0.552 |
| 19 |  | 4 | 1 | 49.068 | 49.068 | 65 | 0.609 |  | 0.992 | 0.604 |
| 20 |  | 4 | 1 | 70.383 | 70.383 | 65 | 0.609 |  | 0.987 | 0.601 |
| 21 |  | 4 | 1 | 43.442 | 43.442 | 65 | 0.609 |  | 0.152 | 0.093 |
| 22 |  | 4 | 1 | 49.503 | 49.503 | 65 | 0.609 |  | 0.986 | 0.600 |
| 23 |  | 4 | 1 | 36.888 | 36.888 | 65 | 0.609 |  | 0.133 | 0.081 |
| 24 |  | 4 | 1 | 4.440 | 4.440 | 65 | 0.609 |  | 0.133 | 0.081 |
| 25 |  | 4 | 1 | 0.232 | 0.232 | 65 | 0.609 |  | 0.133 | 0.081 |
| 26 |  | 5 | 1 | 40.968 | 40.968 | 65 | 0.609 |  | 0.976 | 0.594 |
| 27 |  | 5 | 1 | 40.608 | 40.608 | 65 | 0.609 |  | 0.997 | 0.607 |
| 28 |  | 5 | 1 | 98.568 | 98.568 | 65 | 0.609 |  | 0.973 | 0.593 |
| 29 |  | 5 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.516 | 0.314 |
| 30 |  | 5 | 1 | 85.056 | 85.056 | 65 | 0.609 |  | 0.985 | 0.600 |
| 31 |  | 5 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.330 | 0.201 |
| 32 |  | 6 | 1 | 40.608 | 40.608 | 65 | 0.609 |  | 0.988 | 0.602 |
| 33 |  | 6 | 1 | 36.240 | 36.240 | 65 | 0.609 |  | 0.164 | 0.100 |
| 34 |  | 6 | 1 | 81.288 | 81.288 | 65 | 0.609 |  | 0.994 | 0.605 |
| 35 |  | 6 | 1 | 179.208 | 179.208 | 65 | 0.609 |  | 0.858 | 0.523 |
| 36 |  | 6 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.548 | 0.334 |
| 37 |  | 6 | 1 | 30.528 | 30.528 | 65 | 0.609 |  | 0.149 | 0.091 |
| 38 |  | 6 | 1 | 3.240 | 3.240 | 65 | 0.609 |  | 0.149 | 0.091 |
| 39 |  | 6 | 1 | 0.192 | 0.192 | 65 | 0.609 |  | 0.149 | 0.091 |
| 40 |  | 7 | 1 | 77.520 | 77.520 | 65 | 0.609 |  | 0.988 | 0.602 |
| 41 |  | 7 | 1 | 41.256 | 41.256 | 65 | 0.609 |  | 0.989 | 0.602 |
| 42 |  | 7 | 1 | 36.240 | 36.240 | 65 | 0.609 |  | 0.244 | 0.149 |
| 43 |  | 7 | 1 | 121.608 | 121.608 | 65 | 0.609 |  | 0.996 | 0.607 |
| 44 |  | 7 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.551 | 0.336 |
| 45 |  | 7 | 1 | 30.528 | 30.528 | 65 | 0.609 |  | 0.249 | 0.152 |
| 46 |  | 7 | 1 | 3.240 | 3.240 | 65 | 0.609 |  | 0.249 | 0.152 |
| 47 |  | 7 | 1 | 0.192 | 0.192 | 65 | 0.609 |  | 0.249 | 0.152 |
| 48 |  | 8 | 2 | 37.464 | 74.928 | 65 | 0.609 |  | 1.000 | 0.609 |
| 49 |  | 8 | 6 | 35.280 | 211.680 | 65 | 0.609 |  | 1.000 | 0.609 |
| 50 |  | 8 | 1 | 50.400 | 50.400 | 65 | 0.609 |  | 1.000 | 0.609 |
| 51 | C1515 | 1 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.438 | 0.324 |
| 52 | C1515 | 1 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.237 | 0.175 |
| 53 | C1515 | 2 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.257 | 0.190 |
| 54 | C1515 | 4 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.203 | 0.150 |
| 55 | C1515 | 5 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.150 | 0.111 |
| 56 | C1515 | 6 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.147 | 0.109 |
| 57 | C1515 | 7 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.272 | 0.201 |
| 58 | C1515 | 8 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.574 | 0.424 |
| 59 | C1515 | 8 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.757 | 0.560 |
| 60 | C1515 | 9 | 3 | 2.250 | 6.750 | 18 | 0.740 |  | 1.000 | 0.740 |
| 61 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.373 | 0.276 |
| 62 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.392 | 0.290 |
| 63 | C1521 | 2 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.239 | 0.177 |
| 64 | C1521 | 2 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.209 | 0.155 |
| 65 | C1521 | 4 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.241 | 0.178 |
| 66 | C1521 | 4 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.243 | 0.180 |
| 67 | C1521 | 5 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.176 | 0.130 |
| 68 | C1521 | 5 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.195 | 0.144 |
| 69 | C1521 | 6 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.188 | 0.139 |
| 70 | C1521 | 6 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.198 | 0.146 |
| 71 | C1521 | 7 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.285 | 0.211 |
| 72 | C1521 | 7 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.390 | 0.288 |
| 73 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.605 | 0.447 |
| 74 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.783 | 0.579 |
| 75 | C1521 | 9 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 1.000 | 0.740 |
| 76 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.015 | 0.011 |
| 77 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.242 | 0.179 |
| 78 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.276 | 0.204 |
| 79 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.065 | 0.048 |
| 80 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.042 | 0.031 |
| 81 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.021 | 0.015 |
| 82 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.010 | 0.007 |
| 83 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.157 | 0.116 |
| 立面总面积(㎡) | 2108.275 | 综合太阳得热系数 | 0.737 | 0.451 |

2. 北向：

北-默认立面

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 窗太阳得热系数 | 外遮阳编号 | 外遮阳系数(含环境遮阳) | 综合太阳得热系数 |
| 1 |  | 1 | 1 | 56.610 | 56.610 | 65 | 0.609 |  | 0.040 | 0.024 |
| 2 |  | 2 | 1 | 3.096 | 3.096 | 65 | 0.609 |  | 0.189 | 0.115 |
| 3 |  | 2 | 1 | 3.300 | 3.300 | 65 | 0.609 |  | 0.189 | 0.115 |
| 4 |  | 2 | 1 | 2.880 | 2.880 | 65 | 0.609 |  | 0.189 | 0.115 |
| 5 |  | 2 | 1 | 6.759 | 6.759 | 65 | 0.609 |  | 0.136 | 0.083 |
| 6 |  | 2 | 1 | 4.704 | 4.704 | 65 | 0.609 |  | 0.102 | 0.062 |
| 7 |  | 2 | 1 | 4.860 | 4.860 | 65 | 0.609 |  | 0.102 | 0.062 |
| 8 |  | 2 | 1 | 1.963 | 1.963 | 65 | 0.609 |  | 0.102 | 0.062 |
| 9 |  | 2 | 1 | 12.821 | 12.821 | 65 | 0.609 |  | 0.178 | 0.108 |
| 10 |  | 2 | 1 | 9.600 | 9.600 | 65 | 0.609 |  | 0.222 | 0.135 |
| 11 |  | 2 | 1 | 3.300 | 3.300 | 65 | 0.609 |  | 0.222 | 0.135 |
| 12 |  | 2 | 1 | 22.992 | 22.992 | 65 | 0.609 |  | 0.222 | 0.135 |
| 13 |  | 3 | 1 | 64.353 | 64.353 | 65 | 0.609 |  | 0.986 | 0.600 |
| 14 |  | 3 | 1 | 12.424 | 12.424 | 65 | 0.609 |  | 0.965 | 0.588 |
| 15 |  | 3 | 1 | 31.941 | 31.941 | 65 | 0.609 |  | 0.975 | 0.594 |
| 16 |  | 3 | 1 | 31.920 | 31.920 | 65 | 0.609 |  | 0.742 | 0.452 |
| 17 |  | 3 | 1 | 97.736 | 97.736 | 65 | 0.609 |  | 0.893 | 0.544 |
| 18 |  | 3 | 1 | 32.148 | 32.148 | 65 | 0.609 |  | 0.996 | 0.607 |
| 19 |  | 4 | 1 | 0.116 | 0.116 | 65 | 0.609 |  | 0.095 | 0.058 |
| 20 |  | 4 | 1 | 4.440 | 4.440 | 65 | 0.609 |  | 0.095 | 0.058 |
| 21 |  | 4 | 1 | 37.004 | 37.004 | 65 | 0.609 |  | 0.095 | 0.058 |
| 22 |  | 4 | 1 | 44.950 | 44.950 | 65 | 0.609 |  | 0.976 | 0.594 |
| 23 |  | 4 | 1 | 18.995 | 18.995 | 65 | 0.609 |  | 0.971 | 0.591 |
| 24 |  | 4 | 1 | 24.360 | 24.360 | 65 | 0.609 |  | 0.994 | 0.605 |
| 25 |  | 4 | 1 | 27.028 | 27.028 | 65 | 0.609 |  | 0.996 | 0.607 |
| 26 |  | 4 | 1 | 0.783 | 0.783 | 65 | 0.609 |  | 0.917 | 0.558 |
| 27 |  | 4 | 1 | 49.068 | 49.068 | 65 | 0.609 |  | 0.990 | 0.603 |
| 28 |  | 4 | 1 | 102.776 | 102.776 | 65 | 0.609 |  | 0.904 | 0.551 |
| 29 |  | 4 | 1 | 43.790 | 43.790 | 65 | 0.609 |  | 0.124 | 0.076 |
| 30 |  | 4 | 1 | 49.068 | 49.068 | 65 | 0.609 |  | 0.985 | 0.600 |
| 31 |  | 5 | 1 | 40.968 | 40.968 | 65 | 0.609 |  | 0.987 | 0.601 |
| 32 |  | 5 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.524 | 0.319 |
| 33 |  | 5 | 1 | 40.608 | 40.608 | 65 | 0.609 |  | 0.997 | 0.607 |
| 34 |  | 5 | 1 | 0.648 | 0.648 | 65 | 0.609 |  | 0.895 | 0.545 |
| 35 |  | 5 | 1 | 18.696 | 18.696 | 65 | 0.609 |  | 0.987 | 0.601 |
| 36 |  | 5 | 1 | 20.160 | 20.160 | 65 | 0.609 |  | 0.984 | 0.599 |
| 37 |  | 5 | 1 | 19.488 | 19.488 | 65 | 0.609 |  | 0.987 | 0.601 |
| 38 |  | 5 | 1 | 85.056 | 85.056 | 65 | 0.609 |  | 0.999 | 0.608 |
| 39 |  | 5 | 1 | 40.608 | 40.608 | 65 | 0.609 |  | 0.978 | 0.596 |
| 40 |  | 5 | 1 | 39.576 | 39.576 | 65 | 0.609 |  | 0.995 | 0.606 |
| 41 |  | 6 | 1 | 0.096 | 0.096 | 65 | 0.609 |  | 0.105 | 0.064 |
| 42 |  | 6 | 1 | 3.240 | 3.240 | 65 | 0.609 |  | 0.105 | 0.064 |
| 43 |  | 6 | 1 | 30.624 | 30.624 | 65 | 0.609 |  | 0.105 | 0.064 |
| 44 |  | 6 | 1 | 138.240 | 138.240 | 65 | 0.609 |  | 0.898 | 0.547 |
| 45 |  | 6 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.559 | 0.340 |
| 46 |  | 6 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.598 | 0.364 |
| 47 |  | 6 | 1 | 82.848 | 82.848 | 65 | 0.609 |  | 0.985 | 0.600 |
| 48 |  | 6~7 | 2 | 82.848 | 165.696 | 65 | 0.609 |  | 1.000 | 0.609 |
| 49 |  | 6 | 1 | 36.240 | 36.240 | 65 | 0.609 |  | 0.110 | 0.067 |
| 50 |  | 6 | 1 | 40.608 | 40.608 | 65 | 0.609 |  | 0.790 | 0.481 |
| 51 |  | 7 | 1 | 0.096 | 0.096 | 65 | 0.609 |  | 0.201 | 0.122 |
| 52 |  | 7 | 1 | 3.240 | 3.240 | 65 | 0.609 |  | 0.201 | 0.122 |
| 53 |  | 7 | 1 | 30.624 | 30.624 | 65 | 0.609 |  | 0.201 | 0.122 |
| 54 |  | 7 | 1 | 38.760 | 38.760 | 65 | 0.609 |  | 0.987 | 0.601 |
| 55 |  | 7 | 1 | 79.080 | 79.080 | 65 | 0.609 |  | 0.994 | 0.605 |
| 56 |  | 7 | 1 | 38.760 | 38.760 | 65 | 0.609 |  | 0.988 | 0.602 |
| 57 |  | 7 | 1 | 0.168 | 0.168 | 65 | 0.609 |  | 0.590 | 0.359 |
| 58 |  | 7 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.557 | 0.339 |
| 59 |  | 7 | 1 | 36.240 | 36.240 | 65 | 0.609 |  | 0.194 | 0.118 |
| 60 |  | 8 | 6 | 35.280 | 211.680 | 65 | 0.609 |  | 1.000 | 0.609 |
| 61 |  | 8 | 1 | 50.400 | 50.400 | 65 | 0.609 |  | 1.000 | 0.609 |
| 62 |  | 8 | 2 | 37.464 | 74.928 | 65 | 0.609 |  | 1.000 | 0.609 |
| 63 | C0921 | 1 | 1 | 1.890 | 1.890 | 18 | 0.740 |  | 0.626 | 0.463 |
| 64 | C0921 | 2 | 1 | 1.890 | 1.890 | 18 | 0.740 |  | 0.076 | 0.056 |
| 65 | C0921 | 4 | 1 | 1.890 | 1.890 | 18 | 0.740 |  | 0.233 | 0.172 |
| 66 | C0921 | 5 | 1 | 1.890 | 1.890 | 18 | 0.740 |  | 0.182 | 0.135 |
| 67 | C0921 | 6 | 1 | 1.890 | 1.890 | 18 | 0.740 |  | 0.234 | 0.173 |
| 68 | C0921 | 7 | 1 | 1.890 | 1.890 | 18 | 0.740 |  | 0.325 | 0.240 |
| 69 | C0921 | 8 | 1 | 1.890 | 1.890 | 18 | 0.740 |  | 0.664 | 0.491 |
| 70 | C1515 | 1 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.206 | 0.152 |
| 71 | C1515 | 2 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.180 | 0.133 |
| 72 | C1515 | 2 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.187 | 0.138 |
| 73 | C1515 | 4 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.226 | 0.167 |
| 74 | C1515 | 5 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.164 | 0.121 |
| 75 | C1515 | 6 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.145 | 0.107 |
| 76 | C1515 | 7 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.230 | 0.170 |
| 77 | C1515 | 8 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.544 | 0.402 |
| 78 | C1515 | 9 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.995 | 0.736 |
| 79 | C1515 | 9 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.963 | 0.712 |
| 80 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.207 | 0.153 |
| 81 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.275 | 0.203 |
| 82 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.273 | 0.202 |
| 83 | C1521 | 2 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.056 | 0.041 |
| 84 | C1521 | 4 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.204 | 0.151 |
| 85 | C1521 | 5 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.179 | 0.132 |
| 86 | C1521 | 6 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.232 | 0.172 |
| 87 | C1521 | 7 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.333 | 0.246 |
| 88 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.743 | 0.549 |
| 89 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.596 | 0.441 |
| 90 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.776 | 0.574 |
| 91 | C1521 | 9 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.941 | 0.696 |
| 92 | C1521 | 9 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.807 | 0.597 |
| 93 | C1521 | 9 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.986 | 0.729 |
| 94 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.694 | 0.513 |
| 95 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.671 | 0.496 |
| 96 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.654 | 0.484 |
| 97 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.629 | 0.465 |
| 98 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.732 | 0.541 |
| 立面总面积(㎡) | 2275.906 | 综合太阳得热系数 | 0.812 | 0.498 |

3. 东向：

东-默认立面

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 窗太阳得热系数 | 外遮阳编号 | 外遮阳系数(含环境遮阳) | 综合太阳得热系数 |
| 1 |  | 1 | 1 | 56.610 | 56.610 | 65 | 0.609 |  | 0.044 | 0.027 |
| 2 |  | 2 | 1 | 16.296 | 16.296 | 65 | 0.609 |  | 0.211 | 0.128 |
| 3 |  | 2 | 1 | 9.240 | 9.240 | 65 | 0.609 |  | 0.211 | 0.128 |
| 4 |  | 2 | 1 | 17.304 | 17.304 | 65 | 0.609 |  | 0.211 | 0.128 |
| 5 |  | 2 | 1 | 8.640 | 8.640 | 65 | 0.609 |  | 0.137 | 0.083 |
| 6 |  | 2 | 1 | 9.240 | 9.240 | 65 | 0.609 |  | 0.137 | 0.083 |
| 7 |  | 2 | 1 | 12.192 | 12.192 | 65 | 0.609 |  | 0.137 | 0.083 |
| 8 |  | 2 | 1 | 25.462 | 25.462 | 65 | 0.609 |  | 0.253 | 0.154 |
| 9 |  | 2 | 1 | 40.800 | 40.800 | 65 | 0.609 |  | 0.105 | 0.064 |
| 10 |  | 3 | 1 | 0.513 | 0.513 | 65 | 0.609 |  | 0.871 | 0.530 |
| 11 |  | 3 | 1 | 32.148 | 32.148 | 65 | 0.609 |  | 0.991 | 0.604 |
| 12 |  | 3 | 1 | 32.433 | 32.433 | 65 | 0.609 |  | 0.751 | 0.457 |
| 13 |  | 3 | 1 | 109.440 | 109.440 | 65 | 0.609 |  | 0.192 | 0.117 |
| 14 |  | 3 | 1 | 31.920 | 31.920 | 65 | 0.609 |  | 0.146 | 0.089 |
| 15 |  | 4 | 1 | 44.950 | 44.950 | 65 | 0.609 |  | 0.983 | 0.599 |
| 16 |  | 4 | 1 | 93.670 | 93.670 | 65 | 0.609 |  | 0.984 | 0.599 |
| 17 |  | 4 | 1 | 0.783 | 0.783 | 65 | 0.609 |  | 0.945 | 0.576 |
| 18 |  | 4 | 1 | 49.068 | 49.068 | 65 | 0.609 |  | 1.000 | 0.609 |
| 19 |  | 4 | 1 | 49.068 | 49.068 | 65 | 0.609 |  | 0.996 | 0.607 |
| 20 |  | 4 | 1 | 44.080 | 44.080 | 65 | 0.609 |  | 0.160 | 0.097 |
| 21 |  | 4 | 1 | 43.500 | 43.500 | 65 | 0.609 |  | 0.164 | 0.100 |
| 22 |  | 4 | 1 | 49.503 | 49.503 | 65 | 0.609 |  | 0.988 | 0.602 |
| 23 |  | 5 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.558 | 0.340 |
| 24 |  | 5 | 1 | 40.608 | 40.608 | 65 | 0.609 |  | 1.000 | 0.609 |
| 25 |  | 5 | 1 | 125.376 | 125.376 | 65 | 0.609 |  | 0.924 | 0.563 |
| 26 |  | 5 | 1 | 40.608 | 40.608 | 65 | 0.609 |  | 0.998 | 0.608 |
| 27 |  | 5 | 1 | 125.376 | 125.376 | 65 | 0.609 |  | 0.924 | 0.563 |
| 28 |  | 6 | 2 | 40.968 | 81.936 | 65 | 0.609 |  | 0.994 | 0.605 |
| 29 |  | 6 | 1 | 40.968 | 40.968 | 65 | 0.609 |  | 0.990 | 0.603 |
| 30 |  | 6 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.475 | 0.289 |
| 31 |  | 6 | 1 | 40.608 | 40.608 | 65 | 0.609 |  | 0.998 | 0.608 |
| 32 |  | 6 | 1 | 36.480 | 36.480 | 65 | 0.609 |  | 0.208 | 0.127 |
| 33 |  | 6 | 1 | 36.000 | 36.000 | 65 | 0.609 |  | 0.235 | 0.143 |
| 34 |  | 6 | 1 | 40.968 | 40.968 | 65 | 0.609 |  | 0.990 | 0.603 |
| 35 |  | 7 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.483 | 0.294 |
| 36 |  | 7 | 1 | 41.064 | 41.064 | 65 | 0.609 |  | 1.000 | 0.609 |
| 37 |  | 7 | 1 | 83.568 | 83.568 | 65 | 0.609 |  | 1.000 | 0.609 |
| 38 |  | 7 | 1 | 179.304 | 179.304 | 65 | 0.609 |  | 1.000 | 0.609 |
| 39 |  | 7 | 1 | 36.480 | 36.480 | 65 | 0.609 |  | 0.310 | 0.189 |
| 40 |  | 7 | 1 | 36.000 | 36.000 | 65 | 0.609 |  | 0.301 | 0.183 |
| 41 |  | 8 | 6 | 35.280 | 211.680 | 65 | 0.609 |  | 1.000 | 0.609 |
| 42 |  | 8 | 2 | 37.464 | 74.928 | 65 | 0.609 |  | 1.000 | 0.609 |
| 43 |  | 8 | 1 | 50.400 | 50.400 | 65 | 0.609 |  | 1.000 | 0.609 |
| 44 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.645 | 0.477 |
| 45 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.691 | 0.511 |
| 46 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.724 | 0.535 |
| 47 | C2121 | 1 | 1 | 4.410 | 4.410 | 18 | 0.740 |  | 0.642 | 0.475 |
| 立面总面积(㎡) | 2117.500 | 综合太阳得热系数 | 0.762 | 0.465 |

4. 西向：

西-默认立面

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 门窗编号 | 楼层 | 数量 | 单个面积（㎡） | 总面积（㎡） | 构造编号 | 窗太阳得热系数 | 外遮阳编号 | 外遮阳系数(含环境遮阳) | 综合太阳得热系数 |
| 1 |  | 1 | 1 | 56.610 | 56.610 | 65 | 0.609 |  | 0.114 | 0.069 |
| 2 |  | 2 | 1 | 2.376 | 2.376 | 65 | 0.609 |  | 0.182 | 0.111 |
| 3 |  | 2 | 2 | 19.694 | 39.389 | 65 | 0.609 |  | 0.242 | 0.147 |
| 4 |  | 2 | 1 | 9.523 | 9.523 | 65 | 0.609 |  | 0.242 | 0.147 |
| 5 |  | 2 | 1 | 4.860 | 4.860 | 65 | 0.609 |  | 0.242 | 0.147 |
| 6 |  | 2 | 1 | 1.531 | 1.531 | 65 | 0.609 |  | 0.242 | 0.147 |
| 7 |  | 2 | 1 | 19.277 | 19.277 | 65 | 0.609 |  | 0.268 | 0.163 |
| 8 |  | 2 | 1 | 38.785 | 38.785 | 65 | 0.609 |  | 0.221 | 0.135 |
| 9 |  | 2 | 2 | 15.845 | 31.690 | 65 | 0.609 |  | 0.178 | 0.108 |
| 10 |  | 2 | 1 | 26.396 | 26.396 | 65 | 0.609 |  | 0.180 | 0.110 |
| 11 |  | 2 | 1 | 0.120 | 0.120 | 65 | 0.609 |  | 0.161 | 0.098 |
| 12 |  | 2 | 1 | 4.860 | 4.860 | 65 | 0.609 |  | 0.161 | 0.098 |
| 13 |  | 2 | 1 | 10.296 | 10.296 | 65 | 0.609 |  | 0.161 | 0.098 |
| 14 |  | 2 | 1 | 20.187 | 20.187 | 65 | 0.609 |  | 0.221 | 0.135 |
| 15 |  | 2 | 1 | 18.795 | 18.795 | 65 | 0.609 |  | 0.239 | 0.146 |
| 16 |  | 2 | 2 | 14.486 | 28.972 | 65 | 0.609 |  | 0.206 | 0.125 |
| 17 |  | 3 | 1 | 32.148 | 32.148 | 65 | 0.609 |  | 1.000 | 0.609 |
| 18 |  | 3 | 1 | 32.433 | 32.433 | 65 | 0.609 |  | 0.956 | 0.582 |
| 19 |  | 3 | 1 | 64.581 | 64.581 | 65 | 0.609 |  | 0.987 | 0.601 |
| 20 |  | 3 | 1 | 99.256 | 99.256 | 65 | 0.609 |  | 0.892 | 0.543 |
| 21 |  | 4 | 1 | 49.503 | 49.503 | 65 | 0.609 |  | 0.994 | 0.605 |
| 22 |  | 4 | 1 | 44.950 | 44.950 | 65 | 0.609 |  | 0.814 | 0.496 |
| 23 |  | 4 | 1 | 49.068 | 49.068 | 65 | 0.609 |  | 0.989 | 0.602 |
| 24 |  | 4 | 1 | 44.805 | 44.805 | 65 | 0.609 |  | 0.208 | 0.127 |
| 25 |  | 4 | 1 | 146.943 | 146.943 | 65 | 0.609 |  | 0.926 | 0.564 |
| 26 |  | 5 | 1 | 0.651 | 0.651 | 65 | 0.609 |  | 0.885 | 0.539 |
| 27 |  | 5 | 1 | 40.608 | 40.608 | 65 | 0.609 |  | 0.991 | 0.604 |
| 28 |  | 5 | 1 | 81.288 | 81.288 | 65 | 0.609 |  | 0.891 | 0.543 |
| 29 |  | 5 | 1 | 0.648 | 0.648 | 65 | 0.609 |  | 0.884 | 0.538 |
| 30 |  | 5 | 1 | 81.282 | 81.282 | 65 | 0.609 |  | 0.872 | 0.531 |
| 31 |  | 6 | 1 | 94.800 | 94.800 | 65 | 0.609 |  | 0.993 | 0.605 |
| 32 |  | 6 | 1 | 40.962 | 40.962 | 65 | 0.609 |  | 0.994 | 0.605 |
| 33 |  | 6~7 | 2 | 40.608 | 81.216 | 65 | 0.609 |  | 1.000 | 0.609 |
| 34 |  | 6 | 1 | 81.294 | 81.294 | 65 | 0.609 |  | 0.886 | 0.540 |
| 35 |  | 6 | 1 | 37.080 | 37.080 | 65 | 0.609 |  | 0.233 | 0.142 |
| 36 |  | 7 | 1 | 138.882 | 138.882 | 65 | 0.609 |  | 0.998 | 0.608 |
| 37 |  | 7 | 1 | 44.736 | 44.736 | 65 | 0.609 |  | 1.000 | 0.609 |
| 38 |  | 7 | 1 | 40.975 | 40.975 | 65 | 0.609 |  | 0.989 | 0.602 |
| 39 |  | 7 | 1 | 0.216 | 0.216 | 65 | 0.609 |  | 0.619 | 0.377 |
| 40 |  | 7 | 1 | 37.080 | 37.080 | 65 | 0.609 |  | 0.323 | 0.197 |
| 41 |  | 8 | 1 | 50.400 | 50.400 | 65 | 0.609 |  | 1.000 | 0.609 |
| 42 |  | 8 | 6 | 35.280 | 211.680 | 65 | 0.609 |  | 1.000 | 0.609 |
| 43 |  | 8 | 2 | 37.464 | 74.928 | 65 | 0.609 |  | 1.000 | 0.609 |
| 44 | C1515 | 1 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.184 | 0.136 |
| 45 | C1515 | 2 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.080 | 0.059 |
| 46 | C1515 | 4 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.223 | 0.165 |
| 47 | C1515 | 5 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.227 | 0.168 |
| 48 | C1515 | 6 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.273 | 0.202 |
| 49 | C1515 | 7 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.279 | 0.206 |
| 50 | C1515 | 8 | 1 | 2.250 | 2.250 | 18 | 0.740 |  | 0.575 | 0.425 |
| 51 | C1521 | 1 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.193 | 0.143 |
| 52 | C1521 | 2 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.126 | 0.093 |
| 53 | C1521 | 4 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.271 | 0.200 |
| 54 | C1521 | 5 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.207 | 0.153 |
| 55 | C1521 | 6 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.275 | 0.203 |
| 56 | C1521 | 7 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.341 | 0.252 |
| 57 | C1521 | 8 | 1 | 3.150 | 3.150 | 18 | 0.740 |  | 0.536 | 0.396 |
| 立面总面积(㎡) | 2053.880 | 综合太阳得热系数 | 0.790 | 0.481 |

### 总体热工性能

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 朝向 | 立面 | 面积 | 传热系数 | 综合太阳得热系数 | 窗墙比 |
| 南向 | 南-默认立面 | 2108.28 | 3.16 | 0.45 | 0.63 |
| 北向 | 北-默认立面 | 2275.91 | 3.13 | 0.50 | 0.64 |
| 东向 | 东-默认立面 | 2117.50 | 3.02 | 0.46 | 0.75 |
| 西向 | 西-默认立面 | 2053.88 | 3.06 | 0.48 | 0.75 |
| 综合平均 |  | 8555.56 | 3.09 | 0.47 | 0.68 |

注：本表所统计的外窗包含凸窗。

# 围护结构概况

|  |  |  |
| --- | --- | --- |
|  | 设计建筑 | 参照建筑 |
| 屋顶传热系数K [W/(m2·K)] | 0.94(D:4.56) | 0.80 |
| 外墙（包括非透明幕墙）传热系数K [W/(m2·K)] | 3.24(D:2.08) | 0.80 |
| 屋顶透明部分传热系数K [W/(m2·K)] | 3.90 | 3.00 |
| 屋顶透明部分太阳得热系数 | 0.60 | 0.30 |
| 底面接触室外的架空或外挑楼板传热系数K [W/(m2·K)] | 1.18 | 1.50 |
| 外窗（包括透明幕墙） | 朝向 | 立面 | 窗墙比 | 传热系数 | 太阳得热系数 | 窗墙比 | 传热系数 | 太阳得热系数 |
| 南向 | 南-默认立面 | 0.63 | 3.16 | 0.45 | 0.63 | 2.50 | 0.24 |
| 北向 | 北-默认立面 | 0.64 | 3.13 | 0.50 | 0.64 | 2.50 | 0.30 |
| 东向 | 东-默认立面 | 0.75 | 3.02 | 0.46 | 0.75 | 2.50 | 0.22 |
| 西向 | 西-默认立面 | 0.75 | 3.06 | 0.48 | 0.75 | 2.50 | 0.22 |

备注：1. — 代表本工程无对应项; 2. ——代表参照建筑不要求，取值同设计建筑。

# 设计建筑

## 房间类型

### 房间表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 房间类型 | 空调温度℃ | 供暖温度℃ | 新风量 | 人员密度 | 照明功率密度 | 电器设备功率 |
| 办公-会议室 | 26 | 18 | 30(m3/h.人) | 2.5(㎡/人) | 9(W/㎡) | 15(W/㎡) |
| 办公-其它 | 26 | 20 | 30(m3/h.人) | 20(㎡/人) | 11(W/㎡) | 5(W/㎡) |
| 办公-普通办公室 | 26 | 20 | 30(m3/h.人) | 8(㎡/人) | 9(W/㎡) | 15(W/㎡) |
| 办公-走廊 | 26 | 16 | 30(m3/h.人) | 50(㎡/人) | 5(W/㎡) | 15(W/㎡) |
| 空房间 | － | － | 20(m3/h.人) | 50(㎡/人) | 0(W/㎡) | 0(W/㎡) |

### 作息时间表

详见附录

## 系统类型

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 系统编号 | 系统类型 | 供冷能效比 | 供热能效比 | 面积(㎡) | 包含的房间 |
| 空调系统 | 全空气机组(VAV) | － | － | 6730.09 | B1092(-1),B1054(-1),B1003(-1),B1097(-1),B1096(-1),B1095(-1),B1094(-1),B1093(-1),B1091(-1),B1090(-1),B1089(-1),B1088(-1),B1082(-1),B1081(-1),B1080(-1),B1079(-1),B1078(-1),B1077(-1),B1076(-1),B1074(-1),B1073(-1),B1072(-1),B1071(-1),B1070(-1),B1069(-1),B1068(-1),B1055(-1),B1053(-1),B1052(-1),B1051(-1),B1048(-1),B1047(-1),B1046(-1),B1045(-1),B1044(-1),B1043(-1),B1042(-1),B1041(-1),B1040(-1),B1039(-1),B1038(-1),B1037(-1),B1036(-1),B1035(-1),B1032(-1),B1028(-1),B1027(-1),B1026(-1),B1025(-1),B1024(-1),B1023(-1),B1022(-1),B1021(-1),B1020(-1),B1019(-1),B1018(-1),B1017(-1),B1016(-1),B1015(-1),B1014(-1),B1013(-1),B1012(-1),B1011(-1),B1010(-1),B1009(-1),B1008(-1),B1007(-1),B1006(-1),B1005(-1),B1004(-1),B1002(-1),B1001(-1),A1031(1),A1033(1),A1030(1),A1029(1),A1028(1),A1027(1),A1026(1),A1025(1),A1024(1),A1022(1),A1018(1),A1017(1),A1016(1),A1015(1),A1012(1),A1010(1),A1008(1),A1007(1),A1006(1),A1005(1),A1004(1),A1003(1),A1002(1),A1001(1) |
| 空调系统2 | 全空气机组(VAV) | － | － | 7358.24 | A2021(2),A2032(2),A2031(2),A2026(2),A2023(2),A2022(2),A2020(2),A2019(2),A2018(2),A2017(2),A2016(2),A2015(2),A2014(2),A2013(2),A2012(2),A2006(2),A2005(2),A2004(2),A2003(2),A2002(2),A2001(2),A3030(3),A3001(3),A3040(3),A3039(3),A3032(3),A3031(3),A3029(3),A3028(3),A3027(3),A3026(3),A3025(3),A3022(3),A3021(3),A3020(3),A3019(3),A3018(3),A3017(3),A3015(3),A3010(3),A3009(3),A3008(3),A3007(3),A3006(3),A3005(3),A3004(3),A3003(3) |
| 空调系统3 | 全空气机组(VAV) | － | － | 9804.83 | A4058(4),A4001(4),A4051(4),A4050(4),A4043(4),A4042(4),A4041(4),A4040(4),A4039(4),A4038(4),A4037(4),A4029(4),A4028(4),A4027(4),A4026(4),A4025(4),A4024(4),A4023(4),A4022(4),A4015(4),A4013(4),A4010(4),A4009(4),A4008(4),A4007(4),A4006(4),A4004(4),A5001(5),A5040(5),A5050(5),A5049(5),A5042(5),A5041(5),A5039(5),A5038(5),A5037(5),A5036(5),A5035(5),A5028(5),A5026(5),A5025(5),A5024(5),A5023(5),A5022(5),A5021(5),A5020(5),A5012(5),A5011(5),A5010(5),A5009(5),A5008(5),A5007(5),A5006(5),A5005(5),A5004(5) |
| 空调系统4 | 全空气机组(VAV) | － | － | 9718.91 | A6049(6),A6001(6),A6036(6),A6046(6),A6045(6),A6038(6),A6037(6),A6035(6),A6034(6),A6033(6),A6032(6),A6027(6),A6026(6),A6025(6),A6024(6),A6023(6),A6022(6),A6014(6),A6013(6),A6012(6),A6011(6),A6010(6),A6009(6),A6005(6),A6004(6),A6003(6),A7001(7),A7037(7),A7048(7),A7047(7),A7046(7),A7039(7),A7038(7),A7036(7),A7035(7),A7034(7),A7033(7),A7030(7),A7027(7),A7026(7),A7025(7),A7024(7),A7023(7),A7018(7),A7021(7),A7015(7),A7014(7),A7012(7),A7010(7),A7009(7),A7007(7),A7004(7),A7003(7) |
| 空调系统5 | 全空气机组(VAV) | － | － | 3594.10 | A8001(8),A8034(8),A8033(8),A8026(8),A8025(8),A8024(8),A8023(8),A8022(8),A8021(8),A8020(8),A8019(8),A8018(8),A8012(8),A8011(8),A8010(8),A8009(8),A8008(8),A8005(8),A8004(8),A9016(9),A9015(9),A9014(9),A9013(9),A9012(9),A9011(9),A9010(9),A9009(9),A9008(9),A9007(9) |

## 制冷系统

### 冷水机组

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 名称 | 类型 | 额定耗电量(kW) | 额定制冷量(kW) | 额定性能系数(COP) | 台数 |
| 水冷-螺杆式冷水机组 | 水冷-离心式冷水机组 | 800 | 4720 | 5.90 | 1 |

### 水泵系统

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 类型 | 轴功率(kW) | 扬程(m) | 供回水温差(°C) | 设计工作点效率(%) | 台数 |
| 冷却水泵 | 10 | 25 | 5 | 80 | 1 |
| 冷冻水泵 | 12 | 50 | 5 | 80 | 1 |

### 运行工况

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 负荷率(%) | 机组制冷量(kW) | 机组功率(kW) | 性能系数(COP) | 冷却水泵功率(kW) | 冷冻水泵功率(kW) | 冷却塔功率(kW) |
| 25 | 1180 | 30 | 39.33 | 10 | 8 | 0 |
| 50 | 2360 | 55 | 42.91 | 10 | 8 | 0 |
| 75 | 3540 | 75 | 47.20 | 10 | 8 | 0 |
| 100 | 4720 | 100 | 47.20 | 10 | 8 | 0 |

### 制冷能耗

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 负荷区间(%) | 区间负荷(kWh) | 运行时长(h) | 性能系数(COP) | 制冷机组(kWh) | 冷却水泵(kWh) | 冷冻水泵(kWh) | 冷却塔(kWh) |
| 0~25 | 1255 | 111 | 39.33 | 32 | 1110 | 888 | 0 |
| 25~50 | 212585 | 100 | 42.91 | 4954 | 1000 | 800 | 0 |
| 50~75 | 2627990 | 879 | 47.20 | 55678 | 8790 | 7032 | 0 |
| 75~100 | 815800 | 219 | 47.20 | 17284 | 2190 | 1752 | 0 |
| >100 | 5003 | 1 | － | 100 | 10 | 8 | 0 |
| 合计 | 3662633 | 1310 |  | 78048 | 13100 | 10480 | 0 |

## 供暖系统

## 空调风机

### 全空气机组

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 系统编号 | 风机 | 风量(m3/h) | 最小送风比 | 单位风量耗功率W/(m3/h) | 风机功率(W) | 运行时长(h) | 风机电耗(kWh) | 热回收设备电耗(kWh) |
| 空调系统 | 送风 | 40000 | 0.4 | 0.24 | 9600 | 1199 | 6161 | 0 |
| 排风 | 31022 | 0.24 | 7445 | 1199 | 4779 |
| 空调系统2 | 送风 | 100000 | 0.4 | 0.24 | 24000 | 1199 | 17541 | 0 |
| 排风 | 63291 | 0.24 | 15190 | 1199 | 11102 |
| 空调系统3 | 送风 | 60000 | 0.4 | 0.24 | 14400 | 1199 | 5528 | 0 |
| 排风 | 47009 | 0.24 | 11282 | 1199 | 4331 |
| 空调系统4 | 送风 | 80000 | 0.4 | 0.24 | 19200 | 1199 | 7941 | 0 |
| 排风 | 58365 | 0.24 | 14008 | 1199 | 5794 |
| 空调系统5 | 送风 | 40000 | 0.4 | 0.24 | 9600 | 1310 | 6387 | 0 |
| 排风 | 26504 | 0.24 | 6361 | 1310 | 4232 |
| 合计 |  | 73797 | 0 |

## 照明

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 房间类型 | 单位面积电耗(kWh/㎡) | 房间个数 | 房间合计面积(㎡) | 合计电耗(kWh) |
| 办公-会议室 | 22.08 | 179 | 12415 | 274056 |
| 办公-其它 | 37.94 | 22 | 3186 | 120896 |
| 办公-普通办公室 | 47.80 | 69 | 22314 | 1066517 |
| 办公-走廊 | 17.25 | 11 | 1107 | 19093 |
| 空房间 | 0.00 | 401 | 7534 | 0 |
| 总计 | 1480562 |

# 参照建筑

## 房间类型

### 房间表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 房间类型 | 空调温度℃ | 供暖温度℃ | 新风量 | 人员密度 | 照明功率密度 | 电器设备功率 |
| 办公-会议室 | 26 | 18 | 14(m3/h.人) | 2.5(㎡/人) | 9(W/㎡) | 15(W/㎡) |
| 办公-其它 | 26 | 20 | 30(m3/h.人) | 20(㎡/人) | 11(W/㎡) | 5(W/㎡) |
| 办公-普通办公室 | 26 | 20 | 30(m3/h.人) | 8(㎡/人) | 9(W/㎡) | 15(W/㎡) |
| 办公-走廊 | 26 | 16 | 20(m3/h.人) | 50(㎡/人) | 5(W/㎡) | 15(W/㎡) |
| 空房间 | － | － | 20(m3/h.人) | 50(㎡/人) | 0(W/㎡) | 0(W/㎡) |

### 作息时间表

同设计建筑

## 系统类型

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 系统编号 | 系统类型 | 供冷能效比 | 供热能效比 | 面积(㎡) | 包含的房间 |
| 空调系统 | 全空气机组(CAV) | － | － | 同设计建筑 | 同设计建筑 |
| 空调系统2 | 全空气机组(CAV) | － | － | 同设计建筑 | 同设计建筑 |
| 空调系统3 | 全空气机组(CAV) | － | － | 同设计建筑 | 同设计建筑 |
| 空调系统4 | 全空气机组(CAV) | － | － | 同设计建筑 | 同设计建筑 |
| 空调系统5 | 全空气机组(CAV) | － | － | 同设计建筑 | 同设计建筑 |

## 制冷系统

### 冷水机组

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 名称 | 类型 | 额定耗电量(kW) | 额定制冷量(kW) | 额定性能系数(COP) | 台数 | 全年供冷量(kWh) | 综合部分负荷性能系数(IPLV) | 电耗(kWh) |
| 水冷-螺杆式冷水机组 | 水冷-离心式冷水机组 | 747 | 4405 | 5.90 | 1 | 4441300 | 6.20 | 716339 |
| 合计 | 716339 |

### 冷却水泵

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 机组名称 | 冷水机组制冷量(kW) | 机组性能系数(COP) | 冷凝负荷(kW) | 输送能效比 | 运行时长(h) | 水泵电耗(kWh) |
| 水冷-螺杆式冷水机组 | 4405 | 5.90 | 5151 | 0.0214 | 1199 | 132169 |
| 合计 | 4405 |  | 5151 |  |  | 132169 |

### 冷冻水泵

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 机组名称 | 机组制冷量(kW) | 输送能效比 | 运行时长(h) | 水泵电耗(kWh) |
| 水冷-螺杆式冷水机组 | 4405 | 0.0241 | 1199 | 127273 |
| 合计 | 4405 |  |  | 127273 |

### 冷却塔

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 类型 | 机组制冷量(kW) | 冷却塔风机单位电耗制冷量(kW/kW) | 冷却塔风机功率(kW) | 运行时长(h) | 冷却塔电耗(kWh) |
| 冷却塔 | 4405 | 170 | 25.91 | 1199 | 31065 |

## 供暖系统

## 空调风机

### 全空气机组

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 系统编号 | 风机 | 风量(m3/h) | 单位风量耗功率W/(m3/h) | 风机功率(W) | 运行时长(h) | 风机电耗(kWh) |
| 空调系统 | 送风 | 55280 | 0.3 | 16584 | 1199 | 19884 |
| 排风 | 42872 | 0.3 | 12862 | 1199 | 15421 |
| 空调系统2 | 送风 | 128472 | 0.3 | 38542 | 1199 | 46211 |
| 排风 | 81311 | 0.3 | 24393 | 1199 | 29248 |
| 空调系统3 | 送风 | 66772 | 0.3 | 20032 | 1199 | 24018 |
| 排风 | 52315 | 0.3 | 15695 | 1199 | 18818 |
| 空调系统4 | 送风 | 88403 | 0.3 | 26521 | 1199 | 31799 |
| 排风 | 64495 | 0.3 | 19349 | 1199 | 23199 |
| 空调系统5 | 送风 | 37572 | 0.3 | 11272 | 1199 | 13515 |
| 排风 | 24895 | 0.3 | 7468 | 1199 | 8955 |
| 合计 | 231067 |

## 照明

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 房间类型 | 单位面积电耗(kWh/㎡) | 房间个数 | 房间合计面积(㎡) | 合计电耗(kWh) |
| 办公-会议室 | 22.08 | 179 | 12415 | 274056 |
| 办公-其它 | 37.94 | 22 | 3186 | 120896 |
| 办公-普通办公室 | 47.80 | 69 | 22314 | 1066517 |
| 办公-走廊 | 17.25 | 11 | 1107 | 19093 |
| 空房间 | 0.00 | 401 | 7534 | 0 |
| 总计 | 1480562 |

# 计算结果

注:负荷和电耗均为考虑热回收后的值

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 能耗分类 | 能耗子类 | 设计建筑(kWh/㎡) | 参照建筑(kWh/㎡) | 节能率（%） |
| 建筑负荷 | 耗冷量 | 78.72 | 95.45 | 17.53% |
| 耗热量 | 0.00 | 0.00 | － |
| 冷热合计 | 78.72 | 95.45 | 17.53% |
| 热回收负荷 | 供冷 | 46.07 | － |  |
| 供暖 | 0.00 | － |  |
| 冷热合计 | 46.07 | － |  |
| 供冷电耗 | 中央冷源 | 1.68 | 15.40 | 89.91% |
| 冷却水泵 | 0.28 | 2.84 |
| 冷冻水泵 | 0.23 | 2.74 |
| 冷却塔 | 0.00 | 0.67 |
| 多联机/单元式空调 | 0.00 | 0.00 |
| 供冷合计 | 2.18 | 21.64 |
| 供暖电耗 | 中央热源 | 0.00 | 0.00 | - |
| 供暖水泵 | 0.00 | 0.00 |
| 多联机/单元式热泵 | 0.00 | 0.00 |
| 供暖合计 | 0.00 | 0.00 |
| 风机电耗 | 独立新排风 | 0.00 | 0.00 | 68.06% |
| 风机盘管 | 0.00 | 0.00 |
| 多联机室内机 | 0.00 | 0.00 |
| 全空气系统 | 1.59 | 4.97 |
| 风机合计 | 1.59 | 4.97 |
| 照明电耗 | 31.82 | 31.82 | 0.00% |
| 建筑电耗 | 35.59 | 58.43 | 39.08% |





# 附录

暑假:7.15~8.25; 寒假：1.15~3.1

## 工作日/节假日人员逐时在室率(%)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 房间类型 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 办公-会议室 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 100 | 100 | 100 | 30 | 100 | 100 | 100 | 100 | 50 | 20 | 10 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 100 | 100 | 100 | 30 | 100 | 100 | 100 | 100 | 50 | 20 | 10 | 0 | 0 | 0 | 0 | 0 |
| 办公-其它 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 办公-普通办公室 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 80 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 80 | 0 |
| 办公-走廊 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 空房间 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 50 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 70 | 50 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 50 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 70 | 50 | 0 | 0 | 0 |

注：上行：工作日；下行：节假日

## 工作日/节假日照明开关时间表(%)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 房间类型 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 办公-会议室 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 办公-其它 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 办公-普通办公室 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 0 |
| 办公-走廊 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 80 | 80 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 空房间 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 50 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 80 | 90 | 100 | 100 | 100 | 10 | 10 | 10 |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 50 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 80 | 90 | 100 | 100 | 100 | 10 | 10 | 10 |

注：上行：工作日；下行：节假日

## 工作日/节假日设备逐时使用率(%)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 房间类型 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 办公-会议室 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 50 | 20 | 10 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 50 | 20 | 10 | 0 | 0 | 0 | 0 | 0 |
| 办公-其它 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 50 | 50 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 50 | 50 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 办公-普通办公室 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 50 | 50 | 95 | 95 | 95 | 95 | 30 | 30 | 95 | 95 | 95 | 80 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 50 | 50 | 95 | 95 | 95 | 95 | 30 | 30 | 95 | 95 | 95 | 80 | 0 |
| 办公-走廊 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 50 | 50 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 50 | 95 | 95 | 95 | 50 | 50 | 95 | 95 | 95 | 95 | 30 | 30 | 0 | 0 | 0 | 0 | 0 |
| 空房间 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 50 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 70 | 50 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 50 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 70 | 50 | 0 | 0 | 0 |

注：上行：工作日；下行：节假日

## 工作日/节假日空调系统运行时间表(1:开,0:关)

采暖期：

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 系统编号 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 空调系统 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 空调系统2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 空调系统3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 空调系统4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 空调系统5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

供冷期：

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 系统编号 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 空调系统 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 空调系统2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 空调系统3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 空调系统4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 空调系统5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |

注：上行：工作日；下行：节假日