**建筑碳排放报告书**

公共建筑

|  |  |
| --- | --- |
| 工程名称 | 武汉办公建筑 |
| 工程地点 | 湖北-武汉 |
| 设计编号 |  |
| 建设单位 |  |
| 设计单位 |  |
| 设 计 人 |  |
| 审 核 人 |  |
| 审 定 人 |  |
| 设计日期 | 2024年12月25日 |



|  |  |
| --- | --- |
| 采用软件 | 建筑碳排放CEEB2024 |
| 软件版本 | 20240430(SP1) |
| 研发单位 | 北京绿建软件股份有限公司 |
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# 建筑概况

|  |  |
| --- | --- |
| 工程名称 | 武汉办公建筑 |
| 工程地点 | 湖北-武汉 |
| 地理位置 | 北纬：30.58° | 东经：114.24° |
| 建筑寿命(年) | 50 |
| 建筑面积(m2) | 地上11182 地下5193 |
| 建筑层数 | 地上5 地下1 |
| 建筑高度（m） | 地上22.5 地下6.0 |
| 建筑体积(m3) | 52430.27 |
| 建筑外表面积(m2) | 9294.14 |
| 北向角度 | 120 |
| 结构类型 |  |
| 外墙太阳辐射吸收系数 | 0.29 |
| 屋顶太阳辐射吸收系数 | 0.78 |
| 控温期 | 供冷期:5.15-10.15,供暖期:11.30-2.28 |

#  标准依据

1. 《建筑节能与可再生能源利用通用规范》GB 55015-2021

2. 《建筑碳排放计算标准》GB/T 51366-2019

3. 《绿色建筑评价标准》GB/T50378-2019

4. 《民用建筑绿色性能计算标准》JGJ/T 449-2018

# 软件介绍

本报告内容由建筑碳排放CEEB2024计算并输出，建筑碳排放CEEB以CAD为平台，可与建筑节能模型无缝对接，以国家标准《建筑碳排放计算标准》为主要依据，完整支持建筑全生命周期的碳排放计算，包括建材生产运输、建造拆除、建筑运行和碳汇的计算，以及详细的结果数据分析。

# 气象数据

## 逐日干球温度表



## 逐月辐照量表



## 峰值工况

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 气象数据 | 时刻 | 干球温度(℃) | 湿球温度(℃) | 含湿量(g/kg) | 焓值(kj/kg) |
| 最热 | 07月03日14时 | 37.2 | 27.8 | 20.5 | 90.1 |
| 最冷 | 01月15日02时 | -3.3 | -3.3 | 2.8 | 3.6 |

# 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 | 数据来源 |
| 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 | 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 | 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 | 民用建筑热工设计规范 GB50176-2016 |
| 聚合物砂浆（网格布） | 0.930 | 11.306 | 1800.0 | 1050.0 | 0.0000 | 安徽公共建筑节能设计标准 DB34 T753-2007 |
| 抹面层 | 1.000 | 0.009 | 1000.0 | 1000.0 | 0.0000 |  |
| 卷材防水层 | 1.000 | 0.009 | 1000.0 | 1000.0 | 0.0075 |  |
| 硬泡聚氨酯板、喷涂硬泡聚氨酯 | 0.024 | 0.540 | 35.0 | 3315.0 | 0.0234 | 湖南省公/居建节能设计标准常用材料-2022 |
| 石灰、水泥、砂、砂浆 | 0.870 | 10.750 | 1000.0 | 1000.0 | 0.0975 |  |
| 细石混凝土(钢筋混凝土) | 1.740 | 17.200 | 2500.0 | 935.2 | 0.0158 | 吉林居住建筑节能设计标准 DB22/T5034－2019 |
| 面砖 | 1.000 | 0.009 | 1000.0 | 1000.0 | 0.0000 |  |
| 挤塑聚苯乙烯泡沫塑料（带表皮） | 0.030 | 0.340 | 35.0 | 1380.0 | 0.0000 |  |
| 岩棉板 | 0.040 | 0.750 | 160.0 | 1208.6 | 0.4880 | 湖南省公/居建节能设计标准常用材料-2022 |
| 加气混凝土、泡沫混凝土(ρ=700)(1) | 0.200 | 3.027 | 700.0 | 1050.0 | 0.0998 |  |
| 轻骨料混凝土（ρ=1760-1850） | 0.890 | 7.882 | 1850.0 | 920.0 | 0.0040 | 沈阳市建筑节能设计文件编制深度规定2021 |
| 混凝土多孔砖(190六孔砖）(1) | 0.750 | 7.490 | 1450.0 | 709.4 | 0.0000 |  |

## 围护结构作法简要说明

**1. 屋顶：**屋顶构造一 (K=0.299,D=7.615)：（由上到下）

 面砖 10mm＋水泥砂浆 45mm＋卷材防水层 6mm＋轻骨料混凝土（ρ=1760-1850） 300mm＋细石混凝土(钢筋混凝土) 40mm＋硬泡聚氨酯板、喷涂硬泡聚氨酯 68.6mm＋水泥砂浆 20mm＋钢筋混凝土 200mm＋石灰、水泥、砂、砂浆 20mm

**2. 外墙（填充墙）：**外墙构造一 (K=0.616,D=4.013)：（由外到内）

 抹面层 5mm＋岩棉板 29.7mm＋聚合物砂浆（网格布） 15mm＋加气混凝土、泡沫混凝土(ρ=700)(1) 200mm＋石灰、水泥、砂、砂浆 20mm

**3. 外墙（剪力墙）：**外墙构造一 (K=1.113,D=2.941)：（由外到内）

 水泥砂浆 20mm＋挤塑聚苯乙烯泡沫塑料（带表皮） 20mm＋水泥砂浆 20mm＋钢筋混凝土 200mm＋石灰砂浆 20mm

**4. 挑空楼板：**挑空楼板构造一 (K=0.537,D=2.768)：（由上到下）

 钢筋混凝土 120mm＋岩棉板 77.9mm＋聚合物砂浆（网格布） 10mm＋抹面层 0mm

**5. 幕墙：**75系列平开(遮阳型6Low-E双银+12Ar+6+12Ar+6 充氩气 暖边)(隔热条宽34mm) (K=1.660)：

 传热系数1.660W/㎡.K，窗太阳得热系数0.200

**6. 外窗：**75系列平开(遮阳型6Low-E双银+12Ar+6+12Ar+6 充氩气 暖边)(隔热条宽34mm) (K=1.660)：

 传热系数1.660W/㎡.K，窗太阳得热系数0.200

# 围护结构概况

|  |  |
| --- | --- |
|  | 设计建筑 |
| 体形系数S | 0.18 |
| 屋顶传热系数K和热惰性指标 D | 0.307.62 |
| 外墙传热系数K和热惰性指标 D | 0.633.99 |
| 挑空(或架空)楼板传热系数K和热惰性指标 D | 0.542.77 |
| 天窗传热系数K和太阳得热系数 SHGC | －－ |
| 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 |
| 南向 | 南-默认立面 | 0.52 | 1.66 | 0.20 |
| 东向 | 东-默认立面 | 0.44 | 1.66 | 0.20 |
| 西向 | 西-默认立面 | 0.56 | 1.66 | 0.20 |
|  |  |  |  |  |

# 房间类型

## 房间参数表

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 房间类型 | 空调温度℃ | 供暖温度℃ | 新风量 | 渗透风换气次数 | 人员密度 | 照明功率密度 | 电器设备功率 |
| 会议室 | 26 | 18 | 14(m3/h.人) | 0(次/h) | 2.5(㎡/人) | 9(W/㎡) | 15(W/㎡) |
| 办公-普通办公室 | 26 | 20 | 30(m3/h.人) | 0(次/h) | 8(㎡/人) | 8(W/㎡) | 15(W/㎡) |
| 卫生间 | 28 | 18 | 20(m3/h.人) | 0(次/h) | 20(㎡/人) | 6(W/㎡) | 15(W/㎡) |
| 厨房 | 27 | 18 | 28(次/h) | 0(次/h) | 5(㎡/人) | 9(W/㎡) | 15(W/㎡) |
| 大厅 | 26 | 18 | 20(m3/h.人) | 0(次/h) | 50(㎡/人) | 5(W/㎡) | 15(W/㎡) |
| 报告厅 | 26 | 18 | 14(m3/h.人) | 0(次/h) | 2.5(㎡/人) | 9(W/㎡) | 15(W/㎡) |
| 接待室 | 26 | 20 | 30(m3/h.人) | 0(次/h) | 8(㎡/人) | 9(W/㎡) | 15(W/㎡) |
| 普通办公室 | 26 | 20 | 30(m3/h.人) | 0(次/h) | 8(㎡/人) | 9(W/㎡) | 15(W/㎡) |
| 档案室 | 26 | 18 | 30(m3/h.人) | 0(次/h) | 8(㎡/人) | 7(W/㎡) | 15(W/㎡) |
| 楼梯间 | － | － | 0(m3/h.人) | 0(次/h) | 0(人) | 5(W/㎡) | 15(W/㎡) |
| 空房间 | － | － | 0(m3/h.人) | 0(次/h) | 0(人) | 0(W/㎡) | 0(W/㎡) |
| 设备间 | － | － | 0(次/h) | 0(次/h) | 0(人) | 6(W/㎡) | 15(W/㎡) |
| 走廊 | 26 | 16 | 20(m3/h.人) | 0(次/h) | 50(㎡/人) | 5(W/㎡) | 15(W/㎡) |
| 车库 | － | － | 0(次/h) | 0(次/h) | 0(人) | 4(W/㎡) | 15(W/㎡) |
| 餐厅 | 26 | 18 | 30(m3/h.人) | 0(次/h) | 2.5(㎡/人) | 9(W/㎡) | 15(W/㎡) |

## 作息时间表

详见附录

# 暖通空调系统

## 系统类型

### 系统分区

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 系统编号 | 系统类型 | 制冷SEER | 制热HSPF | 面积(㎡) | 包含的房间 |
| 默认 | 双管制风机盘管 | － | － | 7521.93 | 所有房间 |

### 热回收参数

|  |  |  |  |
| --- | --- | --- | --- |
| 系统编号 | 热回收 | 供冷 | 供暖 |
| 回收效率 | 启动温(焓)差 | 回收效率 | 启动温(焓)差 |
| 默认 | 无 | － | － | － | － |

## 制冷系统

### 默认冷源

#### 供应的系统

|  |  |
| --- | --- |
| 系统编号 | 默认 |

#### 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 |
| 机组1 | 地源/水源热泵 | 60 | 300 | 5.00 | 4 |

#### 水泵系统

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 类型 | 调节 | 流量(m3/h) | 扬程(m) | 设计工作效率(%) | 输入功率(kW) | 冷却塔耗电比(kWh/m3) | 台数 |
| 冷却水泵 | 变频 | 50 | 25 | 80 | 4.9 | 0 | 4 |
| 冷冻水泵 | 变频 | 50 | 30 | 80 | 5.9 | － | 4 |

#### 运行工况

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 负载率(%) | 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) |
| 20 | 240 | 25.24 | 9.51 | 4.86 | 4.4 | 0 |
| 40 | 480 | 54.11 | 8.87 | 9.58 | 8.61 | 0 |
| 60 | 720 | 89.11 | 8.08 | 14.6 | 12.99 | 0 |
| 80 | 960 | 124.03 | 7.74 | 19.19 | 16.99 | 0 |
| 100 | 1200 | 146.34 | 8.20 | 22.52 | 20.07 | 0 |

#### 制冷能耗

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 负荷区间(%) | 区间负荷(kWh) | 运行时长(h) | 制冷机组(kWh) | 平均性能系数(COP) | 冷却水泵(kWh) | 冷冻水泵(kWh) | 冷却塔(kWh) |
| 0~20 | 24833 | 227 | 2612 | 9.51 | 1103 | 999 | 0 |
| 20~40 | 116715 | 320 | 12773 | 9.14 | 3066 | 2755 | 0 |
| 40~60 | 280751 | 462 | 33339 | 8.42 | 6745 | 6001 | 0 |
| 60~80 | 182887 | 234 | 22892 | 7.99 | 4490 | 3976 | 0 |
| 80~100 | 1949 | 2 | 251 | 7.77 | 45 | 40 | 0 |
| >100 | 0 | 0 | 0 | － | 0 | 0 | 0 |
| 合计 | 607136 | 1245 | 71866 |  | 15450 | 13771 | 0 |

|  |  |  |  |
| --- | --- | --- | --- |
| 类别 | 电耗(kWh/a) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2/a) |
| 制冷机组 | 71866 | 0.5703 | 40.985 |
| 冷却水泵 | 15450 | 8.811 |
| 冷却塔 | 0 | 0.000 |
| 冷冻水泵 | 13771 | 7.854 |
| 合计 | 57.650 |

## 供暖系统

### 默认热源

#### 供应的系统

|  |  |
| --- | --- |
| 系统编号 | 默认 |

#### 热泵系统

##### 热泵机组

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 名称 | 类型 | 额定耗电量(kW) | 额定制热量(kW) | 额定性能系数 COP | 台数 |
| 热泵机组 | 地源热泵 | 60 | 300 | 5.00 | 2 |

##### 热水循环泵

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 类型 | 流量(m3/h) | 扬程(m) | 设计工作效率(%) | 输入功率(kW) | 台数 |
| 变频 | 50 | 30 | 80 | 5.9 | 2 |

##### 运行工况

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 负载率(%) | 机组制热量(kW) | 机组功率(kW) | 性能系数(COP) | 供暖水泵功率(kW) | 热源侧水泵功率(kW) |
| 20 | 120 | 25.37 | 4.73 | 2.02 | 1.59 |
| 40 | 240 | 39.34 | 6.10 | 4.08 | 3.41 |
| 60 | 360 | 70.04 | 5.14 | 6.18 | 4.97 |
| 80 | 480 | 87.59 | 5.48 | 7.82 | 6.37 |
| 100 | 600 | 120.72 | 4.97 | 10.3 | 8.23 |

##### 制热能耗

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 负荷区间(%) | 区间负荷(kWh) | 运行时长(h) | 平均性能系数(COP) | 热泵机组(kWh) | 供暖水泵(kWh) | 热源侧水泵(kWh) |
| 0~20 | 25276 | 483 | 4.73 | 5344 | 1263 | 768 |
| 20~40 | 30953 | 187 | 5.29 | 5848 | 519 | 638 |
| 40~60 | 13691 | 47 | 5.64 | 2427 | 219 | 234 |
| 60~80 | 4039 | 10 | 5.27 | 767 | 62 | 64 |
| 80~100 | 2033 | 4 | 5.36 | 379 | 34 | 33 |
| >100 | 619 | 1 | － | 121 | 10 | 8 |
| 合计 | 76611 | 732 |  | 14885 | 2106 | 1744 |

|  |  |  |  |
| --- | --- | --- | --- |
| 类别 | 电耗(kWh/a) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2/a) |
| 热泵机组 | 14885 | 0.5703 | 8.489 |
| 供暖水泵 | 2106 | 1.201 |
| 热源侧水泵 | 1744 | 0.995 |
| 合计 | 10.685 |

## 空调风机

|  |  |  |  |
| --- | --- | --- | --- |
| 类别 | 电耗(kWh/a) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2/a) |
| 独立新排风 | 25599 | 0.5703 | 14.599 |
| 风机盘管 | 791 | 0.451 |
| 全空气机组 | 0 | 0.0000 |
| 合计 | 15.050 |

# 照明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 房间类型 | 单位面积电耗(kWh/㎡.a) | 房间个数 | 房间合计面积(㎡) | 合计电耗(kWh/a) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2/a) |
| 会议室 | 15.12 | 9 | 513 | 7750 | 0.5703 | 4.420 |
| 卫生间 | 10.08 | 22 | 206 | 2075 | 1.183 |
| 厨房 | 15.12 | 1 | 20 | 296 | 0.169 |
| 大厅 | 8.40 | 3 | 1409 | 11835 | 6.749 |
| 报告厅 | 15.12 | 2 | 280 | 4231 | 2.413 |
| 接待室 | 15.12 | 2 | 126 | 1908 | 1.088 |
| 普通办公室 | 13.44 | 31 | 3982 | 53518 | 30.522 |
| 档案室 | 11.76 | 2 | 188 | 2212 | 1.262 |
| 楼梯间 | 13.75 | 56 | 806 | 11087 | 6.323 |
| 空房间 | 0.00 | 4 | 1970 | 0 | 0.000 |
| 设备间 | 10.08 | 121 | 2560 | 25806 | 14.717 |
| 走廊 | 11.81 | 27 | 771 | 9106 | 5.193 |
| 车库 | 6.82 | 1 | 2808 | 19151 | 10.922 |
| 餐厅 | 15.12 | 1 | 403 | 6093 | 3.475 |
| 总计 | 88.436 |

# 插座设备

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 房间类型 | 单位面积电耗(kWh/㎡.a) | 房间个数 | 房间合计面积(㎡) | 合计电耗(kWh/a) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2/a) |
| 会议室 | 35.25 | 9 | 513 | 18068 | 0.5703 | 10.304 |
| 卫生间 | 35.25 | 22 | 206 | 7256 | 4.138 |
| 厨房 | 35.25 | 1 | 20 | 689 | 0.393 |
| 大厅 | 35.25 | 3 | 1409 | 49664 | 28.323 |
| 报告厅 | 35.25 | 2 | 280 | 9865 | 5.626 |
| 接待室 | 35.25 | 2 | 126 | 4448 | 2.537 |
| 普通办公室 | 35.25 | 31 | 3982 | 140366 | 80.051 |
| 档案室 | 35.25 | 2 | 188 | 6631 | 3.782 |
| 楼梯间 | 37.50 | 56 | 806 | 30238 | 17.245 |
| 空房间 | 0.00 | 4 | 1970 | 0 | 0.000 |
| 设备间 | 35.25 | 121 | 2560 | 90244 | 51.466 |
| 走廊 | 33.19 | 27 | 771 | 25584 | 14.590 |
| 车库 | 35.25 | 1 | 2808 | 98984 | 56.451 |
| 餐厅 | 35.25 | 1 | 403 | 14206 | 8.102 |
| 总计 | 283.008 |

# 生活热水

## 热水需求

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 分区 | 用水定额(L/人·d) | 热水温差(℃) | 用水人数 | 年使用天数 | 所需热量(kWh/a) |
| 办公 | 10 | 45 | 1000 | 365 | 187784 |
| 总计 | 187784 |

## 太阳能集热

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 太阳能板分组名称 | 集热器面积(㎡) | 日均辐照量(kj/(㎡·d) | 年利用天数 | 年均集热效率 | 热量损失率 | 太阳能供热(kWh/a) |
| 1 | 0 | 13707 | 256 | 0.42 | 0.25 | 0 |
| 总计 | 0 |

## 热水设备

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 热水设备 | 供热比例 | 供热量(kWh/a) | 能源 | 效率 | 耗电量(kWh/a) |
| 电加热 | 1 | 187784 | 电 | 0.9 | 208649 |
| 备注 | 热水设备承担的供热量=(总需求热量－太阳能供热量)×设备供热比例。耗电量=供热量÷效率。 |

|  |  |  |
| --- | --- | --- |
| 生活热水电耗合计(kWh/a) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2/a) |
| 208649 | 0.5703 | 118.993 |

# 电梯

## 直梯

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 名称 | 特定能量消耗(mWh/kgm) | 额定载重量(kg) | 速度(m/s) | 待机功率(W) | 运行时长(h/天) | 年运行天数 | 数量 | 全年电耗(kWh) |
| 直梯1 | 1.26 | 1350 | 1.75 | 200 | 1.5 | 365 | 4 | 30039 |
| 总计 | 30039 |

## 电梯碳排放

|  |  |  |  |
| --- | --- | --- | --- |
| 电梯 | 电耗(kWh/a) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2/a) |
| 直梯1 | 30039 | 0.5703 | 17.131 |
| 合计 | 17.131 |

# 计算结果

## 建材生产运输碳排放

### 建材生产阶段

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 材料 | 单位 | 用量 | 拆除后回收比例 | 寿命(年) | 碳排放因子(kgCO2e/单位) | 碳排放量(tCO2e) |
| 混凝土 | m3 | 9513.82 | 0 | 全生命周期 | 340 | 3234.699 |
| 钢筋 | t | 1129.87 | 0 | 全生命周期 | 2340 | 2643.896 |
| 型钢 | t | 180.12 | 0 | 全生命周期 | 2365 | 425.984 |
| 水泥 | t | 540.37 | 0 | 全生命周期 | 735 | 397.172 |
| 预拌砂浆 | t | 2587.23 | 0 | 全生命周期 | 370 | 957.275 |
| 砂 | m3 | 1260.87 | 0 | 全生命周期 | 3 | 3.783 |
| 硬泡聚氨酯板、喷涂硬泡聚氨酯 | m3 | 350.95 | 0 | 全生命周期 | 534 | 187.407 |
| 岩棉板 | m3 | 90.82 | 0 | 全生命周期 | 534 | 48.498 |
| 挤塑聚苯乙烯泡沫塑料（带表皮） | m3 | 1.37 | 0 | 全生命周期 | 534 | 0.732 |
| 砌块 | m3 | 1408.24 | 0 | 全生命周期 | 349 | 491.476 |
| 砖 | m3 | 1228.12 | 0 | 全生命周期 | 336 | 412.648 |
| 75系列平开(遮阳型6Low-E双银+12Ar+6+12Ar+6 充氩气 暖边)(隔热条宽34mm) | m2 | 3092.58 | 0 | 全生命周期 | 129.5 | 400.489 |
| 12A钢铝单框双玻窗（平均） | m2 | 92.00 | 0 | 全生命周期 | 129.5 | 11.914 |
| 保温门（多功能门） | m2 | 113.77 | 0 | 全生命周期 | 48.3 | 5.495 |
| 内门 | m2 | 506.09 | 0 | 全生命周期 | 48.3 | 24.444 |
| 陶瓷 | m2 | 16751.50 | 0 | 全生命周期 | 19.5 | 326.654 |
| 涂料 | t | 212.87 | 0 | 全生命周期 | 6550 | 1394.299 |
| 电缆 | kg | 2816.48 | 0 | 全生命周期 | 94.1 | 265.031 |
| 管材 | kg | 24562.40 | 0 | 全生命周期 | 3.6 | 88.425 |
| 合计 | 11320.321 |

### 建材运输阶段

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 材料 | 重量(t) | 运输距离(km) | 寿命(年) | 碳排放因子(kgCO2e/t·km) | 碳排放量(tCO2e) |
| 混凝土 | 22452.60 | 40 | 全生命周期 | 0.115 | 103.282 |
| 钢筋 | 1129.87 | 500 | 全生命周期 | 0.115 | 64.968 |
| 型钢 | 180.12 | 500 | 全生命周期 | 0.115 | 10.357 |
| 水泥 | 540.37 | 500 | 全生命周期 | 0.115 | 31.071 |
| 预拌砂浆 | 2587.23 | 40 | 全生命周期 | 0.115 | 11.901 |
| 砂 | 2017.39 | 500 | 全生命周期 | 0.115 | 116.000 |
| 硬泡聚氨酯板、喷涂硬泡聚氨酯 | 12.28 | 500 | 全生命周期 | 0.115 | 0.706 |
| 岩棉板 | 14.53 | 500 | 全生命周期 | 0.115 | 0.835 |
| 挤塑聚苯乙烯泡沫塑料（带表皮） | 0.05 | 500 | 全生命周期 | 0.115 | 0.003 |
| 砌块 | 1408.24 | 500 | 全生命周期 | 0.115 | 80.974 |
| 砖 | 1780.77 | 500 | 全生命周期 | 0.115 | 102.394 |
| 75系列平开(遮阳型6Low-E双银+12Ar+6+12Ar+6 充氩气 暖边)(隔热条宽34mm) | 61.85 | 500 | 全生命周期 | 0.115 | 3.556 |
| 12A钢铝单框双玻窗（平均） | 1.84 | 500 | 全生命周期 | 0.115 | 0.106 |
| 保温门（多功能门） | 3.41 | 500 | 全生命周期 | 0.115 | 0.196 |
| 内门 | 15.18 | 500 | 全生命周期 | 0.115 | 0.873 |
| 陶瓷 | 502.55 | 500 | 全生命周期 | 0.115 | 28.897 |
| 涂料 | 212.87 | 500 | 全生命周期 | 0.115 | 12.240 |
| 电缆 | 2.82 | 500 | 全生命周期 | 0.115 | 0.162 |
| 管材 | 24.56 | 500 | 全生命周期 | 0.115 | 1.412 |
| 总计 | 569.933 |

## 建筑建造拆除碳排放

### 建筑建造

根据广东省《建筑碳排放计算导则（试行）》，采用经验公式法进行估算，公式如下：

Y = X + 1.99

其中X 为地上层数，Y 为单位面积的碳排放量，单位为：kgCO2/㎡,

则建造阶段碳排放估算值 Cjz=Y×A, 其中A——建筑总面积，㎡。

|  |  |  |  |
| --- | --- | --- | --- |
| 建筑面积(㎡) | 地上层数 | 单位面积碳排放量(kgCO2/㎡) | 建造碳排放量(tCO2) |
| 16374.90 | 5 | 6.99 | 114.461 |

### 建筑拆除

根据广东省《建筑碳排放计算导则（试行）》，建议粗略估算拆除阶段的碳排放，计算方法与建造阶段公式一致即可，公式如下：

Y = X + 1.99

其中X 为地上层数，Y 为单位面积的碳排放量，单位为：kgCO2/㎡,

则拆除阶段碳排放估算值 Ccc=Y×A, 其中A——建筑总面积，㎡。

|  |  |  |  |
| --- | --- | --- | --- |
| 建筑面积(㎡) | 地上层数 | 单位面积碳排放量(kgCO2/㎡) | 拆除碳排放量(tCO2) |
| 16374.90 | 5 | 6.99 | 114.461 |

## 碳汇

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 绿植 | 生长期修正因子 | CO2固定量(kg/㎡·a) | 面积(㎡) | 年数 | 碳固定量(tCO2) |
| 道路绿地 | 1 | 3.4127 | 18257.8 | 50 | 3115.420 |
| 合计 | 3115.420 |

## 建筑运行碳排放

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 电力 | 类别 | 耗电 (kWh/㎡) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2) |
| 供冷(Ec) | 中央冷源 | 219.44 | 0.5703 | 2882.482 |
|  | 冷却水泵 | 47.17 |  |  |
|  | 冷冻水泵 | 42.05 |  |  |
|  | 冷却塔 | 0.00 |  |  |
|  | 多联机/单元式空调 | 0.00 |  |  |
|  | 供冷合计 | 308.66 |  |  |
| 供暖(Eh) | 中央热源 | 45.45 | 0.5703 | 534.234 |
|  | 供暖水泵 | 6.43 |  |  |
|  | 热源侧水泵 | 5.33 |  |  |
|  | 多联机/单元式热泵 | 0.00 |  |  |
|  | 供暖合计 | 57.21 |  |  |
| 空调风机(Ef) | 新排风 | 78.16 | 0.5703 | 752.505 |
|  | 风机盘管 | 2.42 |  |  |
|  | 全空气系统 | 0.00 |  |  |
|  | 风机合计 | 80.58 |  |  |
| 照明 | 473.50 | 0.5703 | 4421.792 |
| 插座设备 | 1515.26 | 0.5703 | 14150.378 |
| 其他(Eo) | 电梯 | 91.72 | 0.5703 | 6806.191 |
|  | 排风机 | 0.00 |  |  |
|  | 生活热水(扣减了太阳能) | 637.10 |  |  |
|  | 其他设备 | 0.00 |  |  |
|  | 合计 | 728.82 |  |  |
| 其他 | 所属类别 | 消耗量(kg) | 碳排放量(tCO2) |
| 制冷剂 | 供冷 | 0 | 0.000 |
| 可再生 | 类别 | 供电(kWh/㎡) | 碳排放因子(kgCO2/kWh) | 碳减排量(tCO2) |
| 可再生能源(Er) | 光伏(Ep) | 0.00 | 0.5703 | 0.000 |
|  | 风力(Ew) | 0.00 |  | 0.000 |
| 建筑运行碳排放合计 | 29547.581 |

## 全生命周期

### 单位面积指标

|  |  |  |
| --- | --- | --- |
| 类别 | 年碳排放量(kgCO2/㎡·a) | 碳排放量(kgCO2/㎡) |
| 建筑材料生产 | 13.83 | 691.32 |
| 建筑材料运输 | 0.70 | 34.81 |
| 建筑建造 | 0.14 | 6.99 |
| 建筑拆除 | 0.14 | 6.99 |
| 建筑运行 | 36.09 | 1804.44 |
| 碳汇 | -3.81 | -190.26 |
| 合计 | 47.09 | 2354.29 |

### 总碳排放量

|  |  |  |
| --- | --- | --- |
| 类别 | 年碳排放量(tCO2/a) | 碳排放量(tCO2) |
| 建筑材料生产 | 226.406 | 11320.321 |
| 建筑材料运输 | 11.399 | 569.933 |
| 建筑建造 | 2.289 | 114.461 |
| 建筑拆除 | 2.289 | 114.461 |
| 建筑运行 | 590.952 | 29547.581 |
| 碳汇 | -62.308 | -3115.420 |
| 合计 | 771.027 | 38551.337 |





# 附录

## 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 |
| 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 | 0 | 20 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 办公-普通办公室 | 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 | 0 | 20 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 卫生间 | 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 | 0 | 20 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 厨房 | 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 | 0 | 20 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 大厅 | 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 | 0 | 20 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 报告厅 | 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 | 0 | 20 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 接待室 | 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 | 0 | 20 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 普通办公室 | 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 | 0 | 20 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 档案室 | 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 | 0 | 20 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 楼梯间 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 设备间 | 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 |
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 车库 | 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 |
| 餐厅 | 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 | 0 | 20 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 |
| 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 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 办公-普通办公室 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 卫生间 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 厨房 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 大厅 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 报告厅 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 接待室 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 普通办公室 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 档案室 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 楼梯间 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 50 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 80 | 90 | 100 | 100 | 100 | 10 | 10 | 10 |
| 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 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 设备间 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 车库 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 53 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 餐厅 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 36 | 62 | 56 | 54 | 43 | 53 | 55 | 58 | 67 | 40 | 18 | 10 | 10 | 10 | 10 | 10 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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 |
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 办公-普通办公室 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 卫生间 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 厨房 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 大厅 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 报告厅 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 接待室 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 普通办公室 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 档案室 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 楼梯间 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 设备间 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 车库 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 餐厅 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 |
| 默认 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 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 |
| 默认 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 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 |

注：上行：工作日；下行：节假日

## 工作日/节假日新风运行时间表(%)

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 |
| 默认 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 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 |
| 默认 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 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 |

注：上行：工作日；下行：节假日