**建筑碳排放报告书**

公共建筑

|  |  |
| --- | --- |
| 工程名称 | 田园养老-康养中心绿色建筑设计 |
| 工程地点 | 山东-济南 |
| 设计编号 | GZA70057 |
| 建设单位 | 山东城市建设职业学院 |
| 设计单位 | 山东城市建设职业学院 |
| 设 计 人 |  |
| 审 核 人 |  |
| 审 定 人 |  |
| 设计日期 | 2025年2月21日 |



|  |  |
| --- | --- |
| 采用软件 | 建筑碳排放CEEB2024 |
| 软件版本 | 20240101(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 | 田园养老-康养中心绿色建筑设计 |
| 工程地点 | 山东-济南 |
| 地理位置 | 北纬：37.00° | 东经：116.98° |
| 建筑寿命(年) | 50 |
| 建筑面积(m2) | 地上6500 地下183 |
| 建筑层数 | 地上6 地下1 |
| 建筑高度（m） | 地上24.0 地下3.0 |
| 建筑体积(m3) | 26067.74 |
| 建筑外表面积(m2) | 7120.92 |
| 北向角度 | 90 |
| 结构类型 | 框架结构 |
| 外墙太阳辐射吸收系数 | 0.75 |
| 屋顶太阳辐射吸收系数 | 0.75 |
| 控温期 | 全年控温 |

#  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 | 06月20日15时 | 37.2 | 21.7 | 10.3 | 63.9 |
| 最冷 | 01月18日06时 | -11.1 | -12.8 | 0.6 | -9.7 |

# 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 |
| 挤塑聚苯板(ρ=25-32) | 0.030 | 0.320 | 28.5 | 1647.0 | 0.0162 | 民用建筑热工设计规范 GB50176-2016 |
| 聚苯颗粒保温砂浆 | 0.060 | 1.020 | 250.0 | 1200.0 | 0.0230 | DB34-T753-2007 |
| 防水层 | 0.170 | 3.302 | 600.0 | 1470.0 | 0.0100 | 湖北低能耗居住建筑节能设计标准 DB42/T559-2022 |
| 细石混凝土 | 1.740 | 17.398 | 2600.0 | 920.0 | 0.0158 | 民用建筑热工设计规范 GB50176-2016 |
| 地砖 | 0.930 | 10.285 | 1700.0 | 920.0 | 0.0140 | 建筑材料手册（第四版） |
| 烧结普通砖 | 0.810 | 9.659 | 1800.0 | 880.0 | 0.1050 | 民用建筑热工设计规范 GB50176-2016 |
| 混合砂浆 | 0.870 | 10.750 | 1700.0 | 1050.0 | 0.0975 | 民用建筑热工设计规范 GB50176-2016 |
| 夯实粘土(ρ=2000) | 1.160 | 12.990 | 2000.0 | 1010.0 | 0.0975 | 民用建筑热工设计规范 GB50176-2016 |
| 1:8水泥珍珠岩 | 0.180 | 2.490 | 400.0 | 1170.0 | 0.1910 | 民用建筑热工设计规范 GB50176-2016 |
| 保温层砂浆（玻化微珠） | 0.080 | 1.190 | 320.0 | 869.3 | 0.0230 | 民用建筑热工设计规范 GB50176-2016 |
| 挤塑型聚苯板(XPS板) | 0.030 | 0.540 | 30.0 | 1790.0 | 0.0162 | 民用建筑热工设计规范 GB50176-2016 |
| 加气混凝土砌块及板材 | 0.160 | 10.000 | 500.0 | 1000.0 | 0.0158 | 民用建筑热工设计规范 GB50176-2016 |
| 水泥砂浆(找平层) | 0.930 | 11.370 | 1800.0 | 1050.0 | 0.0210 | 民用建筑热工设计规范 GB50176-2016 |
| 碎石、卵石混凝土(ρ=2100) | 1.280 | 13.570 | 2100.0 | 920.0 | 0.0173 | 民用建筑热工设计规范 GB50176-2016 |
| 真空绝热板 | 0.008 | 1.200 | 350.0 | 7071.9 | 0.1910 | 安徽省居住建筑节能设计标准 DB34/1466-2019 |

## 围护结构作法简要说明

**1. 屋顶：**XPS保温屋面 (K=0.147,D=6.458)：（由上到下）

 细石混凝土 40mm＋水泥砂浆 20mm＋挤塑型聚苯板(XPS板) 210mm＋水泥砂浆 20mm＋1:8水泥珍珠岩 40mm＋钢筋混凝土 100mm＋混合砂浆 20mm

**2. 外墙：**外墙（填充墙）构造一 (K=0.167,D=18.993)：（由外到内）

 水泥砂浆 20mm＋真空绝热板 40mm＋加气混凝土砌块及板材 200mm＋石灰砂浆 20mm

**3. 挑空楼板：**挑空楼板构造一 (K=0.450,D=2.579)：（由上到下）

 水泥砂浆 20mm＋挤塑型聚苯板(XPS板) 50mm＋钢筋混凝土 120mm＋石灰砂浆 20mm

**4. 控温房间隔墙：**控温房间隔墙一加气砌块 (K=0.612,D=11.696)：

 保温层砂浆（玻化微珠） 15mm＋加气混凝土砌块及板材 180mm＋保温层砂浆（玻化微珠） 15mm

**5. 控温与非控温隔墙：**采暖与非采暖房间隔墙 (K=0.595,D=11.771)：

 保温层砂浆（玻化微珠） 15mm＋加气混凝土砌块及板材 180mm＋保温层砂浆（玻化微珠） 20mm

**6. 外窗：**70系列断桥铝合金窗[5+12Ar+5Low-E+12Ar+5Low-E(暖边)] (K=1.400)：

 传热系数1.400W/㎡.K，窗太阳得热系数0.420

**7. 周边地面：**地面构造一 (K=0.529,D=4.415)：

 地砖 10mm＋水泥砂浆(找平层) 20mm＋细石混凝土 60mm＋挤塑型聚苯板(XPS板) 50mm＋水泥砂浆 20mm＋碎石、卵石混凝土(ρ=2100) 60mm＋夯实粘土(ρ=2000) 150mm

**8. 采暖地下室外墙：**地下墙构造一 (K=0.536,D=10.105)：

 夯实粘土(ρ=2000) 500mm＋烧结普通砖 120mm＋挤塑聚苯板(ρ=25-32) 30mm＋防水层 2mm＋水泥砂浆 20mm＋钢筋混凝土 250mm

# 围护结构概况

|  |  |
| --- | --- |
|  | 设计建筑 |
| 体形系数S | 0.27 |
| 屋顶传热系数K和热惰性指标 D | 0.156.46 |
| 外墙传热系数K和热惰性指标 D | 0.2018.99 |
| 挑空(或架空)楼板传热系数K和热惰性指标 D | 0.452.58 |
| 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 | 0.34 | 1.40 | 0.42 |
| 北向 | 北-默认立面 | 0.21 | 1.40 | 0.42 |
| 东向 | 东-默认立面 | 0.16 | 1.40 | 0.42 |
| 西向 | 西-默认立面 | 0.06 | 1.40 | 0.42 |

# 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 |
| KTV | 26 | 18 | 20(m3/h.人) | 0(次/h) | 1.5(㎡/人) | 5(W/㎡) | 13(W/㎡) |
| 一般商店 | 26 | 20 | 19(m3/h.人) | 0(次/h) | 4(㎡/人) | 9(W/㎡) | 13(W/㎡) |
| 一般超市 | 26 | 18 | 16(m3/h.人) | 0(次/h) | 1.5(㎡/人) | 10(W/㎡) | 13(W/㎡) |
| 休闲空间 | 26 | 18 | 30(m3/h.人) | 0(次/h) | 4(㎡/人) | 8(W/㎡) | 13(W/㎡) |
| 健身房 | 24 | 19 | 30(m3/h.人) | 0(次/h) | 4(㎡/人) | 8(W/㎡) | 15(W/㎡) |
| 共享空间 | 27 | 18 | 20(m3/h.人) | 0(次/h) | 50(㎡/人) | 10(W/㎡) | 13(W/㎡) |
| 卫生间 | 28 | 18 | 20(m3/h.人) | 0(次/h) | 20(㎡/人) | 5(W/㎡) | 15(W/㎡) |
| 厨房 | 27 | 18 | 28(次/h) | 0(次/h) | 5(㎡/人) | 8(W/㎡) | 13(W/㎡) |
| 台球房 | 26 | 16 | 40(m3/h.人) | 0(次/h) | 10(㎡/人) | 22(W/㎡) | 15(W/㎡) |
| 后勤区 | 26 | 20 | 20(m3/h.人) | 0(次/h) | 10(㎡/人) | 8(W/㎡) | 13(W/㎡) |
| 多功能厅 | 26 | 18 | 14(m3/h.人) | 0(次/h) | 2.5(㎡/人) | 12(W/㎡) | 15(W/㎡) |
| 大厅 | 26 | 18 | 20(m3/h.人) | 0(次/h) | 30(㎡/人) | 10(W/㎡) | 15(W/㎡) |
| 普通办公室 | 26 | 20 | 30(m3/h.人) | 0(次/h) | 8(㎡/人) | 8(W/㎡) | 15(W/㎡) |
| 治疗室、诊室 | 26 | 22 | 2(次/h) | 0(次/h) | 6(㎡/人) | 8(W/㎡) | 20(W/㎡) |
| 浴室 | 27 | 25 | 20(m3/h.人) | 0(次/h) | 5(㎡/人) | 6(W/㎡) | 15(W/㎡) |
| 电子信息机房 | 23 | 23 | 0(m3/h.人) | 0(次/h) | 20(㎡/人) | 13.5(W/㎡) | 15(W/㎡) |
| 病房 | 26 | 21 | 2(次/h) | 0(次/h) | 5(㎡/人) | 5.5(W/㎡) | 20(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) | 3.5(W/㎡) | 15(W/㎡) |
| 酒吧、茶座 | 26 | 18 | 30(m3/h.人) | 0(次/h) | 2(㎡/人) | 8(W/㎡) | 0(W/㎡) |
| 阅览室 | 26 | 18 | 30(m3/h.人) | 0(次/h) | 8(㎡/人) | 8(W/㎡) | 15(W/㎡) |
| 餐厅 | 26 | 18 | 30(m3/h.人) | 0(次/h) | 1(㎡/人) | 8(W/㎡) | 13(W/㎡) |

## 作息时间表

详见附录

# 采暖空调

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 类别 | 负荷(kWh/a) | 系统综合性能系数 | 耗电(kWh/a) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2/a) |
| 供冷 | 654622 | 3.5 | 187035 | 0.5703 | 106.666 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 类别 | 负荷(kWh/a) | 系统综合性能系数 | 耗电(kWh/a) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2/a) |
| 供暖 | 401158 | 2.6 | 154292 | 0.5703 | 87.993 |

# 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) |
| KTV | 20.08 | 1 | 84 | 1694 | 0.5703 | 0.966 |
| 一般商店 | 36.14 | 1 | 23 | 833 | 0.475 |
| 一般超市 | 40.15 | 1 | 42 | 1693 | 0.965 |
| 休闲空间 | 32.12 | 35 | 261 | 8372 | 4.774 |
| 健身房 | 13.44 | 1 | 150 | 2017 | 1.150 |
| 共享空间 | 40.15 | 3 | 71 | 2844 | 1.622 |
| 卫生间 | 8.40 | 63 | 343 | 2881 | 1.643 |
| 厨房 | 32.12 | 1 | 125 | 4016 | 2.290 |
| 台球房 | 73.88 | 1 | 48 | 3539 | 2.018 |
| 后勤区 | 32.12 | 1 | 64 | 2050 | 1.169 |
| 多功能厅 | 40.30 | 1 | 178 | 7166 | 4.087 |
| 大厅 | 16.80 | 2 | 503 | 8444 | 4.816 |
| 普通办公室 | 13.44 | 142 | 2073 | 27860 | 15.889 |
| 治疗室、诊室 | 32.12 | 5 | 195 | 6250 | 3.565 |
| 浴室 | 20.15 | 4 | 115 | 2314 | 1.320 |
| 电子信息机房 | 22.68 | 1 | 38 | 859 | 0.490 |
| 病房 | 18.47 | 1 | 50 | 926 | 0.528 |
| 空房间 | 0.00 | 2 | 69 | 0 | 0.000 |
| 设备间 | 36.00 | 1 | 50 | 1803 | 1.028 |
| 走廊 | 8.27 | 4 | 936 | 7741 | 4.415 |
| 酒吧、茶座 | 32.12 | 1 | 118 | 3793 | 2.163 |
| 阅览室 | 13.44 | 1 | 148 | 1991 | 1.135 |
| 餐厅 | 32.12 | 1 | 263 | 8436 | 4.811 |
| 总计 | 61.319 |

# 排风机

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 额定功率(kW) | 台数 | 使用系数 | 运行时间(h/天) | 年运行天数 | 全年电耗(kWh/a) | 碳排放因子(kgCO2/kWh) | 碳排放量(tCO2/a) |
| 0.5 | 20 | 0.6 | 6 | 270 | 9720 | 0.5703 | 5.543 |
| 总计 | 5.543 |

注：此类风机指非空调区域排风机

# 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) |
| 办公区 | 10 | 45 | 200 | 365 | 37557 |
| 总计 | 37557 |

## 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 | 16340 | 256 | 0.4 | 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 | 37557 | 电 | 0.9 | 41729.9 |
| 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) |
| 41730 | 0.5703 | 23.799 |

# 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 | 2.8 | 1600 | 1.6 | 200 | 1.5 | 365 | 2 | 31541 |
| 直梯2 | 1.26 | 1350 | 1.75 | 200 | 1.5 | 365 | 2 | 15019 |
| 总计 | 46561 |

## 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 | 31541 | 0.5703 | 17.988 |
| 直梯2 | 15019 | 8.566 |
| 合计 | 26.554 |

# 光伏发电

|  |  |  |  |
| --- | --- | --- | --- |
| 月 | 发电量(kWh/a) | 碳排放因子(kgCO2/kWh) | 可减少碳排放量(tCO2/a) |
| 1 | 4320 | 0.5703 | 2.4637 |
| 2 | 5400 | 3.07962 |
| 3 | 7210 | 4.11186 |
| 4 | 8900 | 5.07567 |
| 5 | 9000 | 5.1327 |
| 6 | 9450 | 5.38933 |
| 7 | 8050 | 4.59091 |
| 8 | 9960 | 5.68019 |
| 9 | 8870 | 5.05856 |
| 10 | 7660 | 4.3685 |
| 11 | 5620 | 3.20509 |
| 12 | 1230 | 0.701469 |
| 总计 | 48.858 |

# 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 | 3040.91 | 0 | 全生命周期 | 340 | 1033.909 |
| 钢筋 | t | 380.95 | 0 | 全生命周期 | 2340 | 891.423 |
| 型钢 | t | 106.93 | 0 | 全生命周期 | 2365 | 252.889 |
| 水泥 | t | 380.95 | 0 | 全生命周期 | 735 | 279.998 |
| 预拌砂浆 | t | 2038.41 | 0 | 全生命周期 | 370 | 754.212 |
| 砂 | m3 | 594.82 | 0 | 全生命周期 | 3 | 1.784 |
| 挤塑型聚苯板(XPS板) | m3 | 414.79 | 0 | 全生命周期 | 534 | 221.498 |
| 真空绝热板 | m3 | 146.65 | 0 | 全生命周期 | 534 | 78.311 |
| 挤塑聚苯板(ρ=25-32) | m3 | 5.26 | 0 | 全生命周期 | 534 | 2.809 |
| 聚苯颗粒保温砂浆 | m3 | 3.75 | 0 | 全生命周期 | 534 | 2.003 |
| 70系列断桥铝合金窗[5+12Ar+5Low-E+12Ar+5Low-E(暖边)] | m2 | 1250.27 | 0 | 全生命周期 | 129.5 | 161.910 |
| 保温门（多功能门） | m2 | 81.75 | 0 | 全生命周期 | 48.3 | 3.949 |
| 内门 | m2 | 616.64 | 0 | 全生命周期 | 48.3 | 29.784 |
| 陶瓷 | m2 | 8761.83 | 0 | 全生命周期 | 19.5 | 170.856 |
| 涂料 | t | 26.73 | 0 | 全生命周期 | 6550 | 175.082 |
| 电缆 | kg | 334.17 | 0 | 全生命周期 | 94.1 | 31.445 |
| 管材 | kg | 10025.00 | 0 | 全生命周期 | 3.6 | 36.090 |
| 合计 | 4127.952 |

### 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 | 7176.55 | 40 | 全生命周期 | 0.115 | 33.012 |
| 钢筋 | 380.95 | 500 | 全生命周期 | 0.115 | 21.905 |
| 型钢 | 106.93 | 500 | 全生命周期 | 0.115 | 6.148 |
| 水泥 | 380.95 | 500 | 全生命周期 | 0.115 | 21.905 |
| 预拌砂浆 | 2038.41 | 40 | 全生命周期 | 0.115 | 9.377 |
| 砂 | 951.71 | 500 | 全生命周期 | 0.115 | 54.723 |
| 挤塑型聚苯板(XPS板) | 12.44 | 500 | 全生命周期 | 0.115 | 0.715 |
| 真空绝热板 | 51.33 | 500 | 全生命周期 | 0.115 | 2.951 |
| 挤塑聚苯板(ρ=25-32) | 0.15 | 500 | 全生命周期 | 0.115 | 0.009 |
| 聚苯颗粒保温砂浆 | 0.94 | 40 | 全生命周期 | 0.115 | 0.004 |
| 70系列断桥铝合金窗[5+12Ar+5Low-E+12Ar+5Low-E(暖边)] | 25.01 | 500 | 全生命周期 | 0.115 | 1.438 |
| 保温门（多功能门） | 2.45 | 500 | 全生命周期 | 0.115 | 0.141 |
| 内门 | 18.50 | 500 | 全生命周期 | 0.115 | 1.064 |
| 陶瓷 | 262.86 | 500 | 全生命周期 | 0.115 | 15.114 |
| 涂料 | 26.73 | 500 | 全生命周期 | 0.115 | 1.537 |
| 电缆 | 0.33 | 500 | 全生命周期 | 0.115 | 0.019 |
| 管材 | 10.03 | 500 | 全生命周期 | 0.115 | 0.577 |
| 总计 | 170.639 |

## 建筑建造拆除碳排放

### 建筑建造

|  |  |  |  |
| --- | --- | --- | --- |
| 阶段 | 物化阶段（建材生产运输、建筑建造） | 建造占物化阶段比例 | 碳排放量(tCO2) |
| 建造阶段 | 4524.833 | 0.05 | 215.468 |
| 施工临时设施 | 碳排放占施工机械碳排放的比例：0.05 | 10.773 |
|  | 226.242 |

### 建筑拆除

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 分项 | 机械和能源 | 单位 | 单位面积用量 | 碳排因子(kgCO2/单位) | 碳排放量(tCO2) |
| 地上建筑拆除 | 乙炔气 | m3 | 0.1079 | 3.76 | 2.711 |
| 履带式单斗液压挖掘机 | 台班 | 0.0013 | 242.5 | 2.107 |
| 液压镐头机 | 台班 | 0.0013 | 37.6 | 0.327 |
| 长臂液压剪 | 台班 | 0.0023 | 41.8 | 0.643 |
| 电动空气压缩机 | 台班 | 0.0039 | 14.1 | 0.368 |
| 分项 | 机械和能源 | 单位 | 单位体积用量 | 碳排因子(kgCO2/单位) | 碳排放量(tCO2) |
| 地下结构拆除 | 乙炔气 | m3 | 0.0600 | 3.76 | 0.124 |
| 履带式单斗液压挖掘机 | 台班 | 0.0050 | 242.5 | 0.666 |
| 液压镐头机 | 台班 | 0.0340 | 37.6 | 0.702 |
| 电动空气压缩机 | 台班 | 0.0050 | 14.1 | 0.039 |
| 合计 | 7.517 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 垃圾指标(t/m2) | 运输方式 | 运输距离(km) | 运输碳排放因子(kgCO2e/t.km) | 碳排放量(tCO2) |
| 1.6 | 中型汽油货车运输(载重8t) | 50 | 0.115 | 61.487 |

## 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) |
| 大小乔木、灌木、花草密植混种区（乔木平均种植间距<3.0m，土壤深度>1.0m） | 0.7 | 27.5 | 900 | 50 | 866.250 |
| 阔叶大乔木 | 0.7 | 22.5 | 800 | 630.000 |
| 密植灌木丛（高约1.3m，土壤深度>0.5m） | 0.7 | 10.95 | 600 | 229.950 |
| 合计 | 1726.200 |

## 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) | 1399.27 | 0.5703 | 5333.295 |
| 供暖(Eh) | 1154.30 | 0.5703 | 4399.627 |
| 照明 | 804.40 | 0.5703 | 3065.969 |
| 插座设备 | - | 0.5703 | - |
| 其他(Eo) | 电梯 | 348.33 | 0.5703 | 2794.769 |
|  | 排风机 | 72.72 |  |  |
|  | 生活热水(扣减了太阳能) | 312.19 |  |  |
|  | 其他设备 | 0.00 |  |  |
|  | 合计 | 733.25 |  |  |
| 化石燃料 | 所属类别 | 耗热量(kWh/㎡) | 碳排放因子(tCO2/TJ) | 碳排放量(tCO2) |
|  | 供暖系统 | 0.000 |  | 0.000 |
| 无 | 生活热水(扣减了太阳能) | 0.00 | 0 | 0.000 |
| 燃气 | 炊事 | -(m³/㎡) | 55.54 | - |
| 汽油 | 其他设备 | 0 (kg/㎡) | 67.91 | 0.000 |
| 柴油 | 其他设备 | 0 (kg/㎡) | 72.59 | 0.000 |
| 煤炭 | 其他设备 | 0 (kg/㎡) | 2.66(kgCO2/kg) | 0.000 |
| 燃气 | 其他设备 | 0 (kg/㎡) | 55.54 | 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) | 640.92 | 0.5703 | 2442.880 |
|  | 风力(Ew) | 0.00 |  | 0.000 |
| 建筑运行碳排放合计 | 13150.779 |

## 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 | 12.35 | 617.65 |
| 建筑材料运输 | 0.51 | 25.53 |
| 建筑建造 | 0.67 | 33.85 |
| 建筑拆除 | 0.21 | 10.32 |
| 建筑运行 | 39.35 | 1967.70 |
| 碳汇 | -5.17 | -258.28 |
| 合计 | 47.92 | 2396.77 |

### 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 | 82.559 | 4127.952 |
| 建筑材料运输 | 3.413 | 170.639 |
| 建筑建造 | 4.524 | 226.241 |
| 建筑拆除 | 1.380 | 69.004 |
| 建筑运行 | 263.016 | 13150.779 |
| 碳汇 | -34.524 | -1726.200 |
| 合计 | 320.368 | 16018.415 |





# 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 |
| KTV | 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 |
| 一般商店 | 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 |
| 一般超市 | 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 |
| 休闲空间 | 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 |
| 健身房 | 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 |
| 共享空间 | 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 |
| 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 | 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 |
| 台球房 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 70 | 70 | 70 | 70 | 70 | 70 |
| 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 70 | 70 | 70 | 70 | 70 | 70 |
| 后勤区 | 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 |
| 多功能厅 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 70 | 70 | 70 | 70 | 70 | 70 |
| 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 70 | 70 | 70 | 70 | 70 | 70 |
| 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 |
| 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 |
| 治疗室、诊室 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 50 | 95 | 80 | 40 | 20 | 50 | 60 | 60 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 50 | 95 | 80 | 40 | 20 | 50 | 60 | 60 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 |
| 浴室 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 70 | 70 | 70 | 70 | 70 | 70 |
| 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 70 | 70 | 70 | 70 | 70 | 70 |
| 电子信息机房 | 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 |
| 病房 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| 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 |
| 酒吧、茶座 | 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 |
| 阅览室 | 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 |
| 餐厅 | 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 |
| KTV | 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 |
| 一般商店 | 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 |
| 一般超市 | 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 |
| 休闲空间 | 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 |
| 健身房 | 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 |
| 共享空间 | 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 |
| 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 | 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 |
| 台球房 | 10 | 10 | 10 | 10 | 10 | 10 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 50 | 50 | 60 | 90 | 90 | 90 | 90 | 80 | 10 | 10 |
| 10 | 10 | 10 | 10 | 10 | 10 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 50 | 50 | 60 | 90 | 90 | 90 | 90 | 80 | 10 | 10 |
| 后勤区 | 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 |
| 多功能厅 | 10 | 10 | 10 | 10 | 10 | 10 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 50 | 50 | 60 | 90 | 90 | 90 | 90 | 80 | 10 | 10 |
| 10 | 10 | 10 | 10 | 10 | 10 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 50 | 50 | 60 | 90 | 90 | 90 | 90 | 80 | 10 | 10 |
| 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 |
| 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 |
| 治疗室、诊室 | 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 |
| 浴室 | 10 | 10 | 10 | 10 | 10 | 10 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 50 | 50 | 60 | 90 | 90 | 90 | 90 | 80 | 10 | 10 |
| 10 | 10 | 10 | 10 | 10 | 10 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 50 | 50 | 60 | 90 | 90 | 90 | 90 | 80 | 10 | 10 |
| 电子信息机房 | 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 |
| 病房 | 10 | 10 | 10 | 10 | 10 | 10 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 50 | 50 | 60 | 90 | 90 | 90 | 90 | 80 | 10 | 10 |
| 10 | 10 | 10 | 10 | 10 | 10 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 50 | 50 | 60 | 90 | 90 | 90 | 90 | 80 | 10 | 10 |
| 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 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 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 |
| 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 |
| 酒吧、茶座 | 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 |
| 阅览室 | 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 |
| 餐厅 | 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 |
| KTV | 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 |
| 一般商店 | 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 |
| 一般超市 | 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 |
| 休闲空间 | 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 |
| 健身房 | 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 |
| 共享空间 | 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 |
| 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 | 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 |
| 台球房 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 80 | 80 | 80 | 80 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 80 | 80 | 80 | 80 | 0 | 0 |
| 后勤区 | 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 |
| 多功能厅 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 80 | 80 | 80 | 80 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 80 | 80 | 80 | 80 | 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 |
| 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 |
| 治疗室、诊室 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 50 | 95 | 80 | 40 | 20 | 50 | 60 | 60 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 50 | 95 | 80 | 40 | 20 | 50 | 60 | 60 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 |
| 浴室 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 80 | 80 | 80 | 80 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 80 | 80 | 80 | 80 | 0 | 0 |
| 电子信息机房 | 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 |
| 病房 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| 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 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 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 |
| 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 |
| 酒吧、茶座 | 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 |
| 阅览室 | 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 |
| 餐厅 | 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