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| Charakterystyka energetyczna budynku | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Oceniany budynek** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Przeznaczenie budynku | | | | | | | | | | | | | | | | | | | | | | | | | Mieszkalny wielorodzinny | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adres budynku | | | | | | | | | | | | | | | | | | | | | | | | | 59-940 Węgliniec, ul. Sportowa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inwestor | | | | | | | | | | | | | | | | | | | | | | | | | SIM KZN Łużyce sp. z o.o.,  Ul. Sikorskiego 3, 59-940 Węgliniec | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Wskaźnik rocznego zapotrzebowania na nieodnawialną energię pierwotną EP [kWh/(m² · rok)]** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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|  | Image00002.png | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | |
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| Wyniki dla budynku | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Geometria** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Powierzchnia użytkowa | | | | | | | | | | | | | | | | | | | | | | | | | Auż | | | | | | | | | | | | | | | | 1639,6 | | | | | | | | | | | | | m² |
| Powierzchnia pomieszczeń o regulowanej temperaturze (powierzchnia ogrzewana lub chłodzona) | | | | | | | | | | | | | | | | | | | | | | | | | Af | | | | | | | | | | | | | | | | 1639,6 | | | | | | | | | | | | | m² |
| Liczba kondygnacji budynku | | | | | | | | | | | | | | | | | | | | | | | | | Lkond | | | | | | | | | | | | | | | | 4,0 | | | | | | | | | | | | |  |
| Kubatura budynku | | | | | | | | | | | | | | | | | | | | | | | | | Vbud | | | | | | | | | | | | | | | | 4062,9 | | | | | | | | | | | | | m³ |
| Kubatura pomieszczeń o regulowanej temperaturze (ogrzewana lub chłodzona) | | | | | | | | | | | | | | | | | | | | | | | | | Vf | | | | | | | | | | | | | | | | 4062,9 | | | | | | | | | | | | | m³ |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| InstalSystem 5 PL (Rev. 27.3) © InstalSoft 1996-2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - 1 - | | | | | | | | |
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| **Wskaźniki charakterystyki energetycznej** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wskaźnik rocznego zapotrzebowania na nieodnawialną energię pierwotną | | | | | | | | | | | | | | | | | | | | | | | | | EP uzyskane | | | | | | | | | | | | | | | | 48,1 | | | | | | | | | kWh/(m² · rok) | | | | |
| EP wymagane | | | | | | | | | | | | | | | | 65,0 | | | | | | | | | kWh/(m² · rok) | | | | |
| Wskaźnik rocznego zapotrzebowania na energię końcową | | | | | | | | | | | | | | | | | | | | | | | | | EK | | | | | | | | | | | | | | | | 38,0 | | | | | | | | | kWh/(m² · rok) | | | | |
| Wskaźnik rocznego zapotrzebowania na energię użytkową | | | | | | | | | | | | | | | | | | | | | | | | | EU | | | | | | | | | | | | | | | | 43,5 | | | | | | | | | kWh/(m² · rok) | | | | |
| Jednostkowa wielkość emisji CO2 | | | | | | | | | | | | | | | | | | | | | | | | | ECO2 | | | | | | | | | | | | | | | | 0,009 | | | | | | | | | tCO2 / (m² · rok) | | | | |
| Udział odnawialnych źródeł energii w rocznym zapotrzebowaniu na energię końcową | | | | | | | | | | | | | | | | | | | | | | | | | Uoze | | | | | | | | | | | | | | | | 3,8 | | | | | | | | | % | | | | |
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| **Roczne zapotrzebowanie na energię** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Roczne zapotrzebowanie na nieodnawialną energię pierwotną | | | | | | | | | | | | | | | | | | | | | | | | | Qp | | | | | | | | | | | | | | | | 78872 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię końcową | | | | | | | | | | | | | | | | | | | | | | | | | Qk | | | | | | | | | | | | | | | | 62224 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię użytkową | | | | | | | | | | | | | | | | | | | | | | | | | Qu | | | | | | | | | | | | | | | | 71319 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię pomocniczą końcową dostarczaną do budynku dla systemu technicznych | | | | | | | | | | | | | | | | | | | | | | | | | Eel,pom | | | | | | | | | | | | | | | | 0 | | | | | | | | | kWh/rok | | | | |
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| **Obliczeniowa roczna ilość zużywanego nośnika energii lub energii przez budynek** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **System techniczny** | | | | | | | | | | | | | | | | | | | | | | | | | **Rodzaj nośnika energii lub energii** | | | | | | | | | | | | | | | **Ilość nośnika energii lub energii** | | | | | | | | | **Jednostka / (m² · rok)** | | | | | |
| Ogrzewania | | | | | | | | | | | | | | | | | | | | | | | | | 1) Gaz płynny | | | | | | | | | | | | | | | 1,65 | | | | | | | | | kg | | | | | |
| Przygotowania ciepłej wody użytkowej | | | | | | | | | | | | | | | | | | | | | | | | | 1) Gaz płynny | | | | | | | | | | | | | | | 0,58 | | | | | | | | | kg | | | | | |
| 2) Energia słoneczna | | | | | | | | | | | | | | | 2,36 | | | | | | | | | kWh | | | | | |
| 3) Energia elektryczna | | | | | | | | | | | | | | | 6,40 | | | | | | | | | kWh | | | | | |
| Chłodzenia | | | | | | | | | | | | | | | | | | | | | | | | | ------ | | | | | | | | | | | | | | | 0,00 | | | | | | | | | ------ | | | | | |
| Wbudowanej instalacji oświetlenia | | | | | | | | | | | | | | | | | | | | | | | | | ------ | | | | | | | | | | | | | | | 0,00 | | | | | | | | | ------ | | | | | |
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| Wskaźnik rocznego zapotrzebowania na energię użytkową EU | | | | | | | | | | | | | | | | | | | | | | | | | **kWh/(m² · rok)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | | | | | Ciepła woda użytkowa | | | | | | | | | Chłodzenie | | | | | | | | | | Oświetlenie wbudowane | | | | | | | | Suma | | | | | | | |
| [kWh/(m² · rok)] | | | | | | | | | | | 16,0 | | | | | | | | | 27,5 | | | | | | | | | 0,0 | | | | | | | | | |  | | | | | | | | 43,5 | | | | | | | |
| Udział [%] | | | | | | | | | | | 36,7 | | | | | | | | | 63,3 | | | | | | | | | 0,0 | | | | | | | | | |  | | | | | | | | 100 | | | | | | | |
| Wskaźnik rocznego zapotrzebowania na energię użytkową EU: 43,5 kWh/(m² · rok) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Wskaźnik rocznego zapotrzebowania na energię końcową EK | | | | | | | | | | | | | | | | | | | | | | | | | **kWh/(m² · rok)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rodzaj nośnika energii  lub energii | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | | | | | Ciepła woda użytkowa | | | | | | | | | Chłodzenie | | | | | | | | | | Oświetlenie wbudowane | | | | | | | | Suma | | | | | | | |
| Energia elektryczna | | | | | | | | | | | 0,0 | | | | | | | | | 6,4 | | | | | | | | | 0,0 | | | | | | | | | | 0,0 | | | | | | | | 6,4 | | | | | | | |
| Energia słoneczna | | | | | | | | | | | 0,0 | | | | | | | | | 2,4 | | | | | | | | | 0,0 | | | | | | | | | | 0,0 | | | | | | | | 2,4 | | | | | | | |
| Gaz płynny | | | | | | | | | | | 21,6 | | | | | | | | | 7,6 | | | | | | | | | 0,0 | | | | | | | | | | 0,0 | | | | | | | | 29,2 | | | | | | | |
| Suma [kWh/(m² · rok)] | | | | | | | | | | | 21,6 | | | | | | | | | 16,3 | | | | | | | | | 0,0 | | | | | | | | | | 0,0 | | | | | | | | 38,0 | | | | | | | |
| Udział [%] | | | | | | | | | | | 57,0 | | | | | | | | | 43,0 | | | | | | | | | 0,0 | | | | | | | | | | 0,0 | | | | | | | | 100 | | | | | | | |
| Wskaźnik rocznego zapotrzebowania na energię końcową EK: 38,0 kWh/(m² · rok) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Projekt: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Image00001.png | | | | | | | | | | | | | | | | | | | | | | | |
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| Wskaźnik rocznego zapotrzebowania na nieodnawialną energię pierwotną EP | | | | | | | | | | | | | | | | | | | | | | | | | **kWh/(m² · rok)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rodzaj nośnika energii  lub energii | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | | | | | Ciepła woda użytkowa | | | | | | | | | Chłodzenie | | | | | | | | | | Oświetlenie wbudowane | | | | | | | | Suma | | | | | | | |
| Energia elektryczna | | | | | | | | | | | 0,0 | | | | | | | | | 16,0 | | | | | | | | | 0,0 | | | | | | | | | | 0,0 | | | | | | | | 16,0 | | | | | | | |
| Energia słoneczna | | | | | | | | | | | 0,0 | | | | | | | | | 0,0 | | | | | | | | | 0,0 | | | | | | | | | | 0,0 | | | | | | | | 0,0 | | | | | | | |
| Gaz płynny | | | | | | | | | | | 23,8 | | | | | | | | | 8,3 | | | | | | | | | 0,0 | | | | | | | | | | 0,0 | | | | | | | | 32,1 | | | | | | | |
| Suma [kWh/(m² · rok)] | | | | | | | | | | | 23,8 | | | | | | | | | 24,3 | | | | | | | | | 0,0 | | | | | | | | | | 0,0 | | | | | | | | 48,1 | | | | | | | |
| Udział [%] | | | | | | | | | | | 49,5 | | | | | | | | | 50,5 | | | | | | | | | 0,0 | | | | | | | | | | 0,0 | | | | | | | | 100 | | | | | | | |
| Wskaźnik rocznego zapotrzebowania na energię pierwotną EP: 48,1 kWh/(m² · rok) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Roczne zapotrzebowanie na energię dla systemów ogrzewania i wentylacji** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Roczne zapotrzebowanie na energię pierwotną przez system ogrzewania i wentylacji | | | | | | | | | | | | | | | | | | | | | | | | | Qp,H | | | | | | | | | | | | | | | | 39009 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię końcową dostarczoną przez system ogrzewania i wentylacji | | | | | | | | | | | | | | | | | | | | | | | | | Qk,H | | | | | | | | | | | | | | | | 35463 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię użytkową do ogrzewania i wentylacji | | | | | | | | | | | | | | | | | | | | | | | | | QH,nd | | | | | | | | | | | | | | | | 26184 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię pomocniczą końcową dostarczaną dla systemu ogrzewania i wentylacji | | | | | | | | | | | | | | | | | | | | | | | | | Eel,pom,H | | | | | | | | | | | | | | | | 0 | | | | | | | | | kWh/rok | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Sprawność elementów składowych systemu ogrzewania i wentylacji** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elementy składowe systemu | | | | | | | Opis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Średnia sezonowa sprawność | | | | | |
| Wytwarzanie ciepła | | | | | | | Kotły gazowe kondensacyjne (70/55°C) o mocy nominalnej powyżej 50 do 120 kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.92 | | | | | |
| Przesył ciepła | | | | | | | Ogrzewanie centralne wodne z lokalnego zródła ciepła usytuowanego w ogrzewanym budynku z zaizolowanymi przewodami, armaturą i urządzeniami, które są zainstalowane w przestrzeni ogrzewanej | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.96 | | | | | |
| Akumulacja ciepła | | | | | | | Zasobnik ciepła w systemie ogrzewania o parametrach 55/45°C w przestrzeni ogrzewanej | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.95 | | | | | |
| Regulacja i wykorzystanie ciepła | | | | | | | Ogrzewanie wodne z grzejnikami członowymi lub płytowymi w przypadku regulacji centralnej i miejscowej z zaworem termostatycznym o działaniu proporcjonalnym z zakresem proporcjonalności P – 2K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.88 | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Roczne zapotrzebowanie na energię dla systemów przygotowania ciepłej wody użytkowej** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Roczne zapotrzebowanie na energię pierwotną przez systemy przygotowania ciepłej wody użytkowej | | | | | | | | | | | | | | | | | | | | | | | | | Qp,W | | | | | | | | | | | | | | | | 39863 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię końcową dostarczoną przez system przygotowania ciepłej wody użytkowej | | | | | | | | | | | | | | | | | | | | | | | | | Qk,W | | | | | | | | | | | | | | | | 26761 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię użytkową do przygotowania c.w.u. | | | | | | | | | | | | | | | | | | | | | | | | | QW,nd | | | | | | | | | | | | | | | | 45135 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię pomocniczą końcową dostarczaną dla systemu przygotowania ciepłej wody użytkowej | | | | | | | | | | | | | | | | | | | | | | | | | Eel,pom,W | | | | | | | | | | | | | | | | 0 | | | | | | | | | kWh/rok | | | | |
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| InstalSystem 5 PL (Rev. 27.3) © InstalSoft 1996-2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - 3 - | | | | | | | | |
| Projekt: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Image00001.png | | | | | | | | | | | | | | | | | | | | | | | |
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| **Sprawności elementów składowych systemu przygotowania ciepłej wody użytkowej** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elementy składowe systemu | | | | | | Opis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Średnia sezonowa sprawność | | | | | |
| Wytwarzanie ciepła | | | | | | Kotły kondensacyjne, opalane gazem ziemnym lub olejem opałowym lekkim o mocy powyżej 50 kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.88 | | | | | |
| Pompy ciepła typu powietrze/woda, sprężarkowe, napędzane elektrycznie | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.60 | | | | | |
| Przesył ciepła | | | | | | Centralne podgrzewanie wody - systemy z obiegami cyrkulacyjnymi z ograniczeniem czasu pracy, z pionami instalacyjnymi i zaizolowanymi przewodami rozprowadzajacymi. Liczba punktów poboru ciepłej wody powyżej 30 do 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.70 | | | | | |
| Akumulacja ciepła | | | | | | Zasobnik ciepłej wody użytkowej w systemie przygotowania ciepłej wody użytkowej, wyprodukowany po 2005 r. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.85 | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Roczne zapotrzebowanie na energię dla systemów chłodzenia** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Roczne zapotrzebowanie na energię pierwotną przez systemy chłodzenia | | | | | | | | | | | | | | | | | | | | | | | | | Qp,C | | | | | | | | | | | | | | | | 0 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię końcową dostarczoną przez system chłodzenia | | | | | | | | | | | | | | | | | | | | | | | | | Qk,C | | | | | | | | | | | | | | | | 0 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię użytkową do chłodzenia | | | | | | | | | | | | | | | | | | | | | | | | | QC,nd | | | | | | | | | | | | | | | | 0 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię pomocniczą końcową dostarczaną dla systemu chłodzenia | | | | | | | | | | | | | | | | | | | | | | | | | Eel,pom,C | | | | | | | | | | | | | | | | 0 | | | | | | | | | kWh/rok | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Sprawności elementów składowych systemu chłodzenia** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elementy składowe systemu | | | | | | Opis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Średnia sezonowa sprawność | | | | | |
| Wytwarzanie chłodu | | | | | | ------ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ------ | | | | | |
| Przesył chłodu | | | | | | ------ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ------ | | | | | |
| Akumulacja chłodu | | | | | | ------ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ------ | | | | | |
| Regulacja i wykorzystanie chłodu | | | | | | ------ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ------ | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Roczne zapotrzebowanie na energię dla systemów wbudowanej instalacji oświetlenia** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Roczne zapotrzebowanie na energię pierwotną dostarczoną dla systemu wbudowanej instalacji oświetlenia | | | | | | | | | | | | | | | | | | | | | | | | | Qp,L | | | | | | | | | | | | | | | | 0 | | | | | | | | | kWh/rok | | | | |
| Roczne zapotrzebowanie na energię końcową dostarczoną dla systemu wbudowanej instalacji oświetlenia | | | | | | | | | | | | | | | | | | | | | | | | | Qk,L | | | | | | | | | | | | | | | | 0 | | | | | | | | | kWh/rok | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| InstalSystem 5 PL (Rev. 27.3) © InstalSoft 1996-2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - 4 - | | | | | | | | |
| Projekt: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Image00001.png | | | | | | | | | | | | | | | | | | | | | | | |
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| **Przegrody nieprzezroczyste** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nazwa | | | | Opis | | | | | | | | | | | | A | | | | | | %A | | | | | | Współczynik przenikania ciepła przegrody U (W/m2k) | | | | | | | | | | | | | | | | ΦT | | | | | | | %ΦT | | | |
| m2 | | | | | | % | | | | | | W | | | | | | | % | | | |
| Uzyskany | | | | | | | | Wymagany | | | | | | | |
| SZ1 (przy ti ≥ 16°C) | | | | przy ti ≥ 16°C | | | | | | | | | | | | 706,20 | | | | | | 11,47 | | | | | | 0,20 | | | | | | | | 0,20 | | | | | | | | 5650 | | | | | | | 16,01 | | | |
| SZ1 (przy 8°C ≤ ti < 16°C) | | | | przy ti ≥ 16°C | | | | | | | | | | | | 6,39 | | | | | | 0,10 | | | | | | 0,20 | | | | | | | | 0,45 | | | | | | | | 36 | | | | | | | 0,10 | | | |
| SZ1 (przy ti < 8°C) | | | | przy ti ≥ 16°C | | | | | | | | | | | | 108,73 | | | | | | 1,77 | | | | | | 0,20 | | | | | | | | 0,90 | | | | | | | | 544 | | | | | | | 1,54 | | | |
| SW14 (przy Δti < 8°C) | | | |  | | | | | | | | | | | | 933,25 | | | | | | 15,16 | | | | | | 1,97 | | | | | | | | bez wymagań | | | | | | | | 3051 | | | | | | | 8,65 | | | |
| SW26 (przy Δti < 8°C) | | | |  | | | | | | | | | | | | 768,81 | | | | | | 12,49 | | | | | | 1,35 | | | | | | | | bez wymagań | | | | | | | | 776 | | | | | | | 2,20 | | | |
| SW26\_U=0,95 (przy Δti ≥ 8°C) | | | |  | | | | | | | | | | | | 429,01 | | | | | | 6,97 | | | | | | 0,95 | | | | | | | | 1,00 | | | | | | | | 2727 | | | | | | | 7,73 | | | |
| SW4 (przy Δti < 8°C) | | | |  | | | | | | | | | | | | 262,22 | | | | | | 4,26 | | | | | | 3,33 | | | | | | | | bez wymagań | | | | | | | | 0 | | | | | | | 0,00 | | | |
| SD1 (przy ti ≥ 16°C) | | | | przy ti ≥ 16°C | | | | | | | | | | | | 357,87 | | | | | | 5,81 | | | | | | 0,15 | | | | | | | | 0,15 | | | | | | | | 2170 | | | | | | | 6,15 | | | |
| SD1 (przy 8°C ≤ ti < 16°C) | | | | przy ti ≥ 16°C | | | | | | | | | | | | 58,16 | | | | | | 0,95 | | | | | | 0,15 | | | | | | | | 0,30 | | | | | | | | 244 | | | | | | | 0,69 | | | |
| SD1 (przy ti < 8°C) | | | | przy ti ≥ 16°C | | | | | | | | | | | | 78,16 | | | | | | 1,27 | | | | | | 0,15 | | | | | | | | 0,70 | | | | | | | | 293 | | | | | | | 0,83 | | | |
| StW0 (przy Δti ≥ 8°C) | | | | miedzykondygnacyjny | | | | | | | | | | | | 17,74 | | | | | | 0,29 | | | | | | 1,00 | | | | | | | | 1,00 | | | | | | | | 111 | | | | | | | 0,31 | | | |
| StW0 (przy Δti < 8°C) | | | | miedzykondygnacyjny | | | | | | | | | | | | 1464,26 | | | | | | 23,79 | | | | | | 1,00 | | | | | | | | bez wymagań | | | | | | | | 6726 | | | | | | | 19,06 | | | |
| PG1 (przy ti ≥ 16°C) | | | | przy ti ≥ 16°C | | | | | | | | | | | | 375,61 | | | | | | 6,10 | | | | | | 0,30 | | | | | | | | 0,30 | | | | | | | | 919 | | | | | | | 2,60 | | | |
| PG1 (przy 8°C ≤ ti < 16°C) | | | | przy ti ≥ 16°C | | | | | | | | | | | | 69,13 | | | | | | 1,12 | | | | | | 0,30 | | | | | | | | 1,20 | | | | | | | | 7 | | | | | | | 0,02 | | | |
| PG1 (przy ti < 8°C) | | | | przy ti ≥ 16°C | | | | | | | | | | | | 49,44 | | | | | | 0,80 | | | | | | 0,30 | | | | | | | | 1,50 | | | | | | | | 0 | | | | | | | 0,00 | | | |
| DW | | | |  | | | | | | | | | | | | 247,16 | | | | | | 4,02 | | | | | | 1,30 | | | | | | | | bez wymagań | | | | | | | | 609 | | | | | | | 1,73 | | | |
| Razem | | | | | | | | | | | | | | | | 5932,13 | | | | | | 96,39 | | | | | |  | | | | | | | |  | | | | | | | | 23861 | | | | | | | 67,62 | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Przegrody przezroczyste** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nazwa | | | Opis | | | | | | | | | | | A | | | | %A | | | | | Współczynik przenikania ciepła przegrody U (W/m2k) | | | | | | | | | | | | | | gn | | | | | | Fw | | ΦT | | | | | | | %ΦT | | |
| m2 | | | | % | | | | | - | | | | | | - | | W/K | | | | | | | % | | |
| Uzyskany | | | | | | | Wymagany | | | | | | |
| OZ1 (przy ti ≥ 16°C) | | | ≥ +16stC | | | | | | | | | | | 206,24 | | | | 3,35 | | | | | 0,90 | | | | | | | 0,90 | | | | | | | 0,70 | | | | | | 0,90 | | 10724 | | | | | | | 30,39 | | |
| OZ1 (przy ti < 16°C) | | | ≥ +16stC | | | | | | | | | | | 10,08 | | | | 0,16 | | | | | 0,90 | | | | | | | 1,40 | | | | | | | 0,70 | | | | | | 0,90 | | 353 | | | | | | | 1,00 | | |
| DZ | | |  | | | | | | | | | | | 6,00 | | | | 0,10 | | | | | 1,30 | | | | | | | 1,30 | | | | | | | 0,70 | | | | | | 0,90 | | 347 | | | | | | | 0,98 | | |
| Razem | | | | | | | | | | | | | | 222,32 | | | | 3,61 | | | | |  | | | | | | |  | | | | | | |  | | | | | |  | | 11424 | | | | | | | 32,38 | | |
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| InstalSystem 5 PL (Rev. 27.3) © InstalSoft 1996-2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - 5 - | | | | | | | | |
| Projekt: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Image00001.png | | | | | | | | | | | | | | | | | | | | | | | |
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| Wynik dla stref | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Strefa ogrzewana** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Strefa: | | | | | | | | | | | | | | | | | | | | | | | | | CZ. MIESZKALNA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Powierzchnia użytkowa strefy | | | | | | | | | | | | | | | | | | | | | | | | | Auż,s | | | | | | | 1179,0 | | | | | | | | | | | | | | | | | | | m2 | | | |
| Powierzchnia stref o regulowanej temperaturze powietrza | | | | | | | | | | | | | | | | | | | | | | | | | Af,s | | | | | | | 1179,0 | | | | | | | | | | | | | | | | | | | m2 | | | |
| Średnia temp. powietrza wewn. | | | | | | | | | | | | | | | | | | | | | | | | | ti | | | | | | | 20,4 | | | | | | | | | | | | | | | | | | | °C | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **1.1. Wartości roczne i miesięczne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Roczne zapotrzebowanie na energię końcową dla systemów technicznych** | | | | | | | | | | | | | | | | | | | | | | | | | **kWh / rok** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rodzaje nośnika energii lub energii | | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | Urządzenia pomocniczne ogrz. i went | | | | | | Ciepła woda użytkowa | | | | | Urządzenia pomocnicze c.w.u | | | | | | | Chłodzenie | | | | | | Urządzenia pomocniczne dla chłodzenia | | | | Oświetlenie wbudowane | | | | | | | Suma | | |
| Gaz płynny | | | | | | | | | | | | 34639 | | | | | 0 | | | | | | 12398 | | | | | 0 | | | | | | | ------------------------------ | | | | | | ------------------------------ | | | | 0 | | | | | | | 47036 | | |
| Energia elektryczna | | | | | | | | | | | | 0 | | | | | 0 | | | | | | 10490 | | | | | 0 | | | | | | | ------------------------------ | | | | | | ------------------------------ | | | | 0 | | | | | | | 10490 | | |
| Energia słoneczna | | | | | | | | | | | | 0 | | | | | 0 | | | | | | 3873 | | | | | 0 | | | | | | | ------------------------------ | | | | | | ------------------------------ | | | | 0 | | | | | | | 3873 | | |
| Suma [kWh/rok] | | | | | | | | | | | | 34639 | | | | | 0 | | | | | | 26761 | | | | | 0 | | | | | | | ------------------------------ | | | | | | ------------------------------ | | | | 0 | | | | | | | 61400 | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Roczne zapotrzebowanie na energię pierwotną dla systemów technicznych** | | | | | | | | | | | | | | | | | | | | | | | | | **kWh / rok** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rodzaje nośnika energii lub energii | | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | | | | | Ciepła woda użytkowa | | | | | | | | Chłodzenie | | | | | | | | | Oświetlenie wbudowane | | | | | | | | Suma | | | | | | | | |
| Gaz płynny | | | | | | | | | | | | 38102 | | | | | | | | | 13637 | | | | | | | | ------------------------------ | | | | | | | | | 0 | | | | | | | | 51740 | | | | | | | | |
| Energia elektryczna | | | | | | | | | | | | 0 | | | | | | | | | 26226 | | | | | | | | ------------------------------ | | | | | | | | | 0 | | | | | | | | 26226 | | | | | | | | |
| Energia słoneczna | | | | | | | | | | | | 0 | | | | | | | | | 0 | | | | | | | | ------------------------------ | | | | | | | | | 0 | | | | | | | | 0 | | | | | | | | |
| Suma [kWh/rok] | | | | | | | | | | | | 38102 | | | | | | | | | 39863 | | | | | | | | ------------------------------ | | | | | | | | | 0 | | | | | | | | 77965 | | | | | | | | |
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| InstalSystem 5 PL (Rev. 27.3) © InstalSoft 1996-2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - 6 - | | | | | | | | |
| Projekt: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Image00001.png | | | | | | | | | | | | | | | | | | | | | | | |
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| **Miesięczne zestawienie danych dla stref ogrzewanych** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Liczba dni/godzin w miesiącu | | | Średnia miesięczna temperatura powietrza zewnętrznego według danych klimatycznych z najbliższej stacji meteorologicznej | | | | Zapotrzebowanie na energię użytkową do ogrzewania i wentylacji | | Całkowita ilość ciepła przenoszonego ze strefy ogrzewanej w n-tym miesiącu | | | | Ilość ciepła przenoszona ze strefy ogrzewanej przez przenikanie w n-tym miesiącu | | | | Współczynnik przenoszenia ciepła przez przenikanie ze strefy ogrzewanej w n-tym miesiącu | | | | | Ilości ciepła przenoszonego ze strefy ogrzewanej przez wentylację w n-tym miesiącu | | | Współczynnik przenoszenia ciepła przez wentylację ze strefy ogrzewanej | | | | | | Całkowita ilości zysków ciepła w strefie ogrzewanej w n-tym miesiącu | | | Współczynnik wykorzystania zysków ciepła w strefie ogrzewanej w n-tym miesiącu roku | | | | | | Bezwymiarowy stosunek zysków ciepła do bilansu cieplnego dla trybu ogrzewania | | Zyski ciepła od promieniowania słonecznego | | | | Miesięczne wewnętrzne zyski ciepła | | | | | Miesięczne zapotrzebowanie na energię użytkową do przygotowania ciepłej wody użytkowej | |
|
| Miesiąc | | Nd | | | θe,n | | | | QH,nd,s,n | | QH,ht,s,n | | | | Qtr,s,n | | | | Htr,s | | | | | Qve,s,n | | | Hve,s | | | | | | QH,gn,s,n | | | ηH,gn,s,n | | | | | | γH | | Qsol,H | | | | Qint | | | | | QW,nd,s | |
| °C | | | | kWh | | kWh | | | | kWh | | | | W/K | | | | | kWh | | | W/K | | | | | | kWh | | | - | | | | | | - | | kWh | | | | kWh | | | | | kWh | |
| Styczeń | | 31 / 744 | | | -1,5 | | | | 8119 | | 16816 | | | | 8114 | | | | 497,2 | | | | | 8702 | | | 533,2 | | | | | | 8697 | | | 1,00 | | | | | | 0,52 | | 2469 | | | | 6228 | | | | | 9,0 | |
| Luty | | 28 / 672 | | | -2,4 | | | | 6838 | | 15812 | | | | 7629 | | | | 497,2 | | | | | 8182 | | | 533,2 | | | | | | 8974 | | | 1,00 | | | | | | 0,57 | | 3348 | | | | 5625 | | | | | 9,0 | |
| Marzec | | 31 / 744 | | | 4,6 | | | | 811 | | 12139 | | | | 5857 | | | | 497,2 | | | | | 6282 | | | 533,2 | | | | | | 11734 | | | 0,97 | | | | | | 0,97 | | 5505 | | | | 6228 | | | | | 9,0 | |
| Kwiecień | | 30 / 720 | | | 6,3 | | | | 17 | | 10486 | | | | 5060 | | | | 497,2 | | | | | 5426 | | | 533,2 | | | | | | 13551 | | | 0,77 | | | | | | 1,29 | | 7523 | | | | 6027 | | | | | 9,0 | |
| Maj | | 31 / 744 | | | 11,6 | | | | 0 | | 6773 | | | | 3268 | | | | 497,2 | | | | | 3505 | | | 533,2 | | | | | | 16079 | | | 0,42 | | | | | | 2,37 | | 9851 | | | | 6228 | | | | | 9,0 | |
| Czerwiec | | 30 / 720 | | | 15,0 | | | | 0 | | 4032 | | | | 1945 | | | | 497,2 | | | | | 2086 | | | 533,2 | | | | | | 15927 | | | 0,25 | | | | | | 3,95 | | 9899 | | | | 6027 | | | | | 9,0 | |
| Lipiec | | 31 / 744 | | | 16,5 | | | | 0 | | 3016 | | | | 1455 | | | | 497,2 | | | | | 1561 | | | 533,2 | | | | | | 16487 | | | 0,18 | | | | | | 5,47 | | 10259 | | | | 6228 | | | | | 9,0 | |
| Sierpień | | 31 / 744 | | | 15,3 | | | | 0 | | 3936 | | | | 1899 | | | | 497,2 | | | | | 2037 | | | 533,2 | | | | | | 15442 | | | 0,25 | | | | | | 3,92 | | 9214 | | | | 6228 | | | | | 9,0 | |
| Wrzesień | | 30 / 720 | | | 12,0 | | | | 0 | | 6257 | | | | 3019 | | | | 497,2 | | | | | 3238 | | | 533,2 | | | | | | 12152 | | | 0,51 | | | | | | 1,94 | | 6124 | | | | 6027 | | | | | 9,0 | |
| Październik | | 31 / 744 | | | 7,7 | | | | 114 | | 9763 | | | | 4711 | | | | 497,2 | | | | | 5052 | | | 533,2 | | | | | | 11034 | | | 0,87 | | | | | | 1,13 | | 4806 | | | | 6228 | | | | | 9,0 | |
| Listopad | | 30 / 720 | | | 4,5 | | | | 2869 | | 11822 | | | | 5704 | | | | 497,2 | | | | | 6117 | | | 533,2 | | | | | | 8963 | | | 1,00 | | | | | | 0,76 | | 2936 | | | | 6027 | | | | | 9,0 | |
| Grudzień | | 31 / 744 | | | 0,5 | | | | 6808 | | 15282 | | | | 7374 | | | | 497,2 | | | | | 7908 | | | 533,2 | | | | | | 8474 | | | 1,00 | | | | | | 0,55 | | 2246 | | | | 6228 | | | | | 9,0 | |
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| **1.2. Systemy techniczne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **1.2.1 Systemy ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | Średnia sezonowa sprawność wytwarzania ciepła z nośnika energii lub energii dostarczanych do źródła ciepła | | | | | | Stosunek sumy mocy cieplnej grzejników usytuowanych przy ścianach zewnętrznych do sumy mocy cieplnej wszystkich grzejników w systemie ogrzewania | | | | | Obliczeniowa średnia sezonowa sprawność regulacji i wykorzystania ciepła w przestrzeni ogrzewanej | | | | | | | Średnia sezonowa sprawność przesyłu ciepła ze źródła ciepła do przestrzeni ogrzewanej | | | | | | Średnia sezonowa sprawność akumulacji ciepła w elementach pojemnościowych systemu ogrzewania | | | | Średnia sezonowa sprawność całkowita i-tego systemu ogrzewania | | | | | | | Udział w rocznym zapotrzebowaniu na energię użytkową do ogrzewania i wentylacji zapewniany przez i-ty podsystem w systemie ogrzewania (suma udziałów jest równa 1) | | |
|
| Nazwa | | | | Nośnik energii | | | | | | | | wH | | | | | ηH,g | | | | | | x | | | | | ηH,e' | | | | | | | ηH,d | | | | | | ηH,s | | | | ηH,tot,i | | | | | | | Xi | | |
| Kocioł gazowy | | | | Gaz płynny | | | | | | | | 1,10 | | | | | 0,92 | | | | | | 1,00 | | | | | 0,88 | | | | | | | 0,96 | | | | | | 0,95 | | | | 0,74 | | | | | | | 1,00 | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych urządzeń pomocniczych dla systemów ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | Zapotrzebowanie na moc elektryczną do napędu urządzenia pomocniczego | | | | | | | Czas działania urządzenia pomocniczego w ciągu roku | | |
| Nazwa | | | | | | | | | | | | | | | | | | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | wel | | | | qel | | | | | | | tel | | |
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| **1.2.2. Systemy wentylacyjne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów wentylacyjnych** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Krotność wymiany powietrza w budynku spowodowana infiltracją powietrza przez nieszczelności obudowy budynku w warunkach eksploatacyjnych | | | | | | | | | | Podstawowy strumień powietrza zewnętrznego w okresie użytkowania budynku odniesiony do powierzchni strefy ogrzewanej | | | | Udział czasu działania wentylatorów wentylacji mechanicznej w miesiącu, równy wykorzystaniu budynku w miesiącu | | | | | | | Łączna miesięczna skuteczność zastosowania urządzenia do odzysku ciepła z powietrza wywiewanego | | |
| Typ budynku | | | | | | | | | | | | | Typ wentylacji | | | | | | | | | | | | | | | | | | n | | | | | | | | | | Vve,1,s | | | | β | | | | | | | ηoc,n | | |
| Wielorodzinny | | | | | | | | | | | | | Wentylacja mechaniczna wywiewna | | | | | | | | | | | | | | | | | | 0,2 | | | | | | | | | | 0,32 | | | | 0,30 | | | | | | | 0,00 | | |
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| **1.2.3. System przygotowania c.w.u** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów przygotowania c.w.u.** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | | Sprawność wytwarzania ciepła dla przygotowania ciepłej wody użytkowej w źródłach ciepła | | | | | Średnia roczna sprawność wykorzystania ciepła | | | | | | | Średnia roczna sprawność przesyłu ciepła ze źródła ciepła do zaworów czerpalnych | | | | | | Średnia roczna sprawność akumulacji ciepła w elementach pojemnościowych systemu przygotowania ciepłej wody użytkowej | | | | Średnia sezonowa sprawność całkowita i-tego systemu ogrzewania | | | | | | | Część całkowitej dostawy ciepła uśredniona w ciągu roku, pokrywana przez zdefiniowany system | | |
| Nazwa | | | | | | | | Nośnik energii | | | | | | | | | wW | | | | | | ηW,g | | | | | ηW,e | | | | | | | ηW,d | | | | | | ηW,s | | | | ηW,tot,i | | | | | | | Xi | | |
| Kocioł gazowy | | | | | | | | Gaz płynny | | | | | | | | | 1,10 | | | | | | 0,88 | | | | | 1,00 | | | | | | | 0,70 | | | | | | 0,85 | | | | 0,52 | | | | | | | 0,20 | | |
| Pompa Ciepła | | | | | | | | Energia elektryczna | | | | | | | | | 2,50 | | | | | | 2,60 | | | | | 1,00 | | | | | | | 0,70 | | | | | | 0,85 | | | | 1,55 | | | | | | | 0,50 | | |
| Panele PV | | | | | | | | Energia słoneczna | | | | | | | | | 0,00 | | | | | | 2,60 | | | | | 1,00 | | | | | | | 0,70 | | | | | | 0,85 | | | | 1,55 | | | | | | | 0,30 | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych urządzeń pomocniczych dla systemów przygotowania c.w.u.** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | Zapotrzebowanie na moc elektryczną do napędu urządzenia pomocniczego | | | | | | | Czas działania urządzenia pomocniczego w ciągu roku | | |
| Nazwa | | | | | | | | | | | | | | | | | | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | wel | | | | qel | | | | | | | tel | | |
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| **1.2.4. System wbudowanej instalacji oświetlenia.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów wbudowanej instalacji oświetlenia** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | | | | Liczbowy wskaźnik energii oświetlenia wyznaczony według PN dotyczącej charakterystyki energetycznej  budynków − wymagania energetyczne dotyczące oświetlenia | | | | | | | | | Powierzchnia pomieszczeń wyposażonych w system wbudowanej instalacji oświetlenia równa powierzchni przyjętej do obliczenia wskaźnika LENI | | | | | | Udział w rocznym zapotrzebowaniu na energię końcową dostarczaną do budynku lub części budynku dla systemu wbudowanej instalacji oświetlenia zapewniany przez l-ty podsystem w systemie wbudowanej instalacji oświetlenia (suma udziałów jest równa 1) | | | | | |
|
| Nazwa | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | | | wel | | | | | | | | LENI | | | | | | | | | AL | | | | | | Xi | | | | | |
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| InstalSystem 5 PL (Rev. 27.3) © InstalSoft 1996-2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - 11 - | | | | | | | | |
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| **Strefa ogrzewana** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Strefa: | | | | | | | | | | | | | | | | | | | | | | | | | KOTŁOWNIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Powierzchnia użytkowa strefy | | | | | | | | | | | | | | | | | | | | | | | | | Auż,s | | | | | | | 14,4 | | | | | | | | | | | | | | | | | | | m2 | | | |
| Powierzchnia stref o regulowanej temperaturze powietrza | | | | | | | | | | | | | | | | | | | | | | | | | Af,s | | | | | | | 14,4 | | | | | | | | | | | | | | | | | | | m2 | | | |
| Średnia temp. powietrza wewn. | | | | | | | | | | | | | | | | | | | | | | | | | ti | | | | | | | 20,0 | | | | | | | | | | | | | | | | | | | °C | | | |
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| **1.1. Wartości roczne i miesięczne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Roczne zapotrzebowanie na energię końcową dla systemów technicznych** | | | | | | | | | | | | | | | | | | | | | | | | | **kWh / rok** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rodzaje nośnika energii lub energii | | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | Urządzenia pomocniczne ogrz. i went | | | | | | Ciepła woda użytkowa | | | | | Urządzenia pomocnicze c.w.u | | | | | | | Chłodzenie | | | | | | Urządzenia pomocniczne dla chłodzenia | | | | Oświetlenie wbudowane | | | | | | | Suma | | |
| Gaz płynny | | | | | | | | | | | | 824 | | | | | 0 | | | | | | 0 | | | | | 0 | | | | | | | ------------------------------ | | | | | | ------------------------------ | | | | 0 | | | | | | | 824 | | |
| Suma [kWh/rok] | | | | | | | | | | | | 824 | | | | | 0 | | | | | | 0 | | | | | 0 | | | | | | | ------------------------------ | | | | | | ------------------------------ | | | | 0 | | | | | | | 824 | | |
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| **Roczne zapotrzebowanie na energię pierwotną dla systemów technicznych** | | | | | | | | | | | | | | | | | | | | | | | | | **kWh / rok** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rodzaje nośnika energii lub energii | | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | | | | | Ciepła woda użytkowa | | | | | | | | Chłodzenie | | | | | | | | | Oświetlenie wbudowane | | | | | | | | Suma | | | | | | | | |
| Gaz płynny | | | | | | | | | | | | 906 | | | | | | | | | 0 | | | | | | | | ------------------------------ | | | | | | | | | 0 | | | | | | | | 906 | | | | | | | | |
| Suma [kWh/rok] | | | | | | | | | | | | 906 | | | | | | | | | 0 | | | | | | | | ------------------------------ | | | | | | | | | 0 | | | | | | | | 906 | | | | | | | | |
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| **Miesięczne zestawienie danych dla stref ogrzewanych** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Liczba dni/godzin w miesiącu | | | Średnia miesięczna temperatura powietrza zewnętrznego według danych klimatycznych z najbliższej stacji meteorologicznej | | | | Zapotrzebowanie na energię użytkową do ogrzewania i wentylacji | | Całkowita ilość ciepła przenoszonego ze strefy ogrzewanej w n-tym miesiącu | | | | Ilość ciepła przenoszona ze strefy ogrzewanej przez przenikanie w n-tym miesiącu | | | | Współczynnik przenoszenia ciepła przez przenikanie ze strefy ogrzewanej w n-tym miesiącu | | | | | Ilości ciepła przenoszonego ze strefy ogrzewanej przez wentylację w n-tym miesiącu | | | Współczynnik przenoszenia ciepła przez wentylację ze strefy ogrzewanej | | | | | | Całkowita ilości zysków ciepła w strefie ogrzewanej w n-tym miesiącu | | | Współczynnik wykorzystania zysków ciepła w strefie ogrzewanej w n-tym miesiącu roku | | | | | | Bezwymiarowy stosunek zysków ciepła do bilansu cieplnego dla trybu ogrzewania | | Zyski ciepła od promieniowania słonecznego | | | | Miesięczne wewnętrzne zyski ciepła | | | | | Miesięczne zapotrzebowanie na energię użytkową do przygotowania ciepłej wody użytkowej | |
|
| Miesiąc | | Nd | | | θe,n | | | | QH,nd,s,n | | QH,ht,s,n | | | | Qtr,s,n | | | | Htr,s | | | | | Qve,s,n | | | Hve,s | | | | | | QH,gn,s,n | | | ηH,gn,s,n | | | | | | γH | | Qsol,H | | | | Qint | | | | | QW,nd,s | |
| °C | | | | kWh | | kWh | | | | kWh | | | | W/K | | | | | kWh | | | W/K | | | | | | kWh | | | - | | | | | | - | | kWh | | | | kWh | | | | | kWh | |
| Styczeń | | 31 / 744 | | | -1,5 | | | | 160 | | 263 | | | | 134 | | | | 8,4 | | | | | 129 | | | 8,1 | | | | | | 103 | | | 1,00 | | | | | | 0,39 | | 27 | | | | 76 | | | | | 0,1 | |
| Luty | | 28 / 672 | | | -2,4 | | | | 146 | | 247 | | | | 126 | | | | 8,4 | | | | | 121 | | | 8,1 | | | | | | 101 | | | 1,00 | | | | | | 0,41 | | 33 | | | | 69 | | | | | 0,1 | |
| Marzec | | 31 / 744 | | | 4,6 | | | | 48 | | 188 | | | | 96 | | | | 8,4 | | | | | 92 | | | 8,1 | | | | | | 140 | | | 1,00 | | | | | | 0,75 | | 64 | | | | 76 | | | | | 0,1 | |
| Kwiecień | | 30 / 720 | | | 6,3 | | | | 10 | | 162 | | | | 83 | | | | 8,4 | | | | | 80 | | | 8,1 | | | | | | 162 | | | 0,94 | | | | | | 1,00 | | 88 | | | | 74 | | | | | 0,1 | |
| Maj | | 31 / 744 | | | 11,6 | | | | 0 | | 103 | | | | 52 | | | | 8,4 | | | | | 50 | | | 8,1 | | | | | | 202 | | | 0,51 | | | | | | 1,97 | | 126 | | | | 76 | | | | | 0,1 | |
| Czerwiec | | 30 / 720 | | | 15,0 | | | | 0 | | 59 | | | | 30 | | | | 8,4 | | | | | 29 | | | 8,1 | | | | | | 202 | | | 0,29 | | | | | | 3,42 | | 129 | | | | 74 | | | | | 0,1 | |
| Lipiec | | 31 / 744 | | | 16,5 | | | | 0 | | 43 | | | | 22 | | | | 8,4 | | | | | 21 | | | 8,1 | | | | | | 211 | | | 0,20 | | | | | | 4,92 | | 135 | | | | 76 | | | | | 0,1 | |
| Sierpień | | 31 / 744 | | | 15,3 | | | | 0 | | 57 | | | | 29 | | | | 8,4 | | | | | 28 | | | 8,1 | | | | | | 190 | | | 0,30 | | | | | | 3,31 | | 114 | | | | 76 | | | | | 0,1 | |
| Wrzesień | | 30 / 720 | | | 12,0 | | | | 0 | | 95 | | | | 48 | | | | 8,4 | | | | | 46 | | | 8,1 | | | | | | 152 | | | 0,62 | | | | | | 1,61 | | 79 | | | | 74 | | | | | 0,1 | |
| Październik | | 31 / 744 | | | 7,7 | | | | 25 | | 150 | | | | 77 | | | | 8,4 | | | | | 74 | | | 8,1 | | | | | | 126 | | | 0,99 | | | | | | 0,84 | | 50 | | | | 76 | | | | | 0,1 | |
| Listopad | | 30 / 720 | | | 4,5 | | | | 79 | | 183 | | | | 93 | | | | 8,4 | | | | | 90 | | | 8,1 | | | | | | 105 | | | 1,00 | | | | | | 0,57 | | 31 | | | | 74 | | | | | 0,1 | |
| Grudzień | | 31 / 744 | | | 0,5 | | | | 140 | | 238 | | | | 121 | | | | 8,4 | | | | | 117 | | | 8,1 | | | | | | 99 | | | 1,00 | | | | | | 0,41 | | 23 | | | | 76 | | | | | 0,1 | |
| Suma | |  | | |  | | | | 608 | | 1790 | | | | 912 | | | |  | | | | | 878 | | |  | | | | | | 1794 | | |  | | | | | |  | | 899 | | | | 895 | | | | | 1 | |
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| **1.2. Systemy techniczne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **1.2.1 Systemy ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | Średnia sezonowa sprawność wytwarzania ciepła z nośnika energii lub energii dostarczanych do źródła ciepła | | | | | | Stosunek sumy mocy cieplnej grzejników usytuowanych przy ścianach zewnętrznych do sumy mocy cieplnej wszystkich grzejników w systemie ogrzewania | | | | | Obliczeniowa średnia sezonowa sprawność regulacji i wykorzystania ciepła w przestrzeni ogrzewanej | | | | | | | Średnia sezonowa sprawność przesyłu ciepła ze źródła ciepła do przestrzeni ogrzewanej | | | | | | Średnia sezonowa sprawność akumulacji ciepła w elementach pojemnościowych systemu ogrzewania | | | | Średnia sezonowa sprawność całkowita i-tego systemu ogrzewania | | | | | | | Udział w rocznym zapotrzebowaniu na energię użytkową do ogrzewania i wentylacji zapewniany przez i-ty podsystem w systemie ogrzewania (suma udziałów jest równa 1) | | |
|
| Nazwa | | | | Nośnik energii | | | | | | | | wH | | | | | ηH,g | | | | | | x | | | | | ηH,e' | | | | | | | ηH,d | | | | | | ηH,s | | | | ηH,tot,i | | | | | | | Xi | | |
| Kocioł gazowy | | | | Gaz płynny | | | | | | | | 1,10 | | | | | 0,92 | | | | | | 1,00 | | | | | 0,88 | | | | | | | 0,96 | | | | | | 0,95 | | | | 0,74 | | | | | | | 1,00 | | |
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| **Zestawienie danych urządzeń pomocniczych dla systemów ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | Zapotrzebowanie na moc elektryczną do napędu urządzenia pomocniczego | | | | | | | Czas działania urządzenia pomocniczego w ciągu roku | | |
| Nazwa | | | | | | | | | | | | | | | | | | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | wel | | | | qel | | | | | | | tel | | |
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| **1.2.2. Systemy wentylacyjne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów wentylacyjnych** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Krotność wymiany powietrza w budynku spowodowana infiltracją powietrza przez nieszczelności obudowy budynku w warunkach eksploatacyjnych | | | | | | | | | | Podstawowy strumień powietrza zewnętrznego w okresie użytkowania budynku odniesiony do powierzchni strefy ogrzewanej | | | | Udział czasu działania wentylatorów wentylacji mechanicznej w miesiącu, równy wykorzystaniu budynku w miesiącu | | | | | | | Łączna miesięczna skuteczność zastosowania urządzenia do odzysku ciepła z powietrza wywiewanego | | |
| Typ budynku | | | | | | | | | | | | | Typ wentylacji | | | | | | | | | | | | | | | | | | n | | | | | | | | | | Vve,1,s | | | | β | | | | | | | ηoc,n | | |
| Wielorodzinny | | | | | | | | | | | | | Wentylacja grawitacyjna | | | | | | | | | | | | | | | | | | 0,2 | | | | | | | | | | 0,32 | | | | 0,30 | | | | | | | 0,00 | | |
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| **1.2.3. System przygotowania c.w.u** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów przygotowania c.w.u.** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | | Sprawność wytwarzania ciepła dla przygotowania ciepłej wody użytkowej w źródłach ciepła | | | | | Średnia roczna sprawność wykorzystania ciepła | | | | | | | Średnia roczna sprawność przesyłu ciepła ze źródła ciepła do zaworów czerpalnych | | | | | | Średnia roczna sprawność akumulacji ciepła w elementach pojemnościowych systemu przygotowania ciepłej wody użytkowej | | | | Średnia sezonowa sprawność całkowita i-tego systemu ogrzewania | | | | | | | Część całkowitej dostawy ciepła uśredniona w ciągu roku, pokrywana przez zdefiniowany system | | |
| Nazwa | | | | | | | | Nośnik energii | | | | | | | | | wW | | | | | | ηW,g | | | | | ηW,e | | | | | | | ηW,d | | | | | | ηW,s | | | | ηW,tot,i | | | | | | | Xi | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych urządzeń pomocniczych dla systemów przygotowania c.w.u.** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | Zapotrzebowanie na moc elektryczną do napędu urządzenia pomocniczego | | | | | | | Czas działania urządzenia pomocniczego w ciągu roku | | |
| Nazwa | | | | | | | | | | | | | | | | | | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | wel | | | | qel | | | | | | | tel | | |
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| InstalSystem 5 PL (Rev. 27.3) © InstalSoft 1996-2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - 16 - | | | | | | | | |
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| **1.2.4. System wbudowanej instalacji oświetlenia.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów wbudowanej instalacji oświetlenia** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | | | | Liczbowy wskaźnik energii oświetlenia wyznaczony według PN dotyczącej charakterystyki energetycznej  budynków − wymagania energetyczne dotyczące oświetlenia | | | | | | | | | Powierzchnia pomieszczeń wyposażonych w system wbudowanej instalacji oświetlenia równa powierzchni przyjętej do obliczenia wskaźnika LENI | | | | | | Udział w rocznym zapotrzebowaniu na energię końcową dostarczaną do budynku lub części budynku dla systemu wbudowanej instalacji oświetlenia zapewniany przez l-ty podsystem w systemie wbudowanej instalacji oświetlenia (suma udziałów jest równa 1) | | | | | |
|
| Nazwa | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | | | wel | | | | | | | | LENI | | | | | | | | | AL | | | | | | Xi | | | | | |
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| InstalSystem 5 PL (Rev. 27.3) © InstalSoft 1996-2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - 17 - | | | | | | | | |
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| **Strefa ogrzewana** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Strefa: | | | | | | | | | | | | | | | | | | | | | | | | | KOMUNIKACJA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Powierzchnia użytkowa strefy | | | | | | | | | | | | | | | | | | | | | | | | | Auż,s | | | | | | | 227,2 | | | | | | | | | | | | | | | | | | | m2 | | | |
| Powierzchnia stref o regulowanej temperaturze powietrza | | | | | | | | | | | | | | | | | | | | | | | | | Af,s | | | | | | | 227,2 | | | | | | | | | | | | | | | | | | | m2 | | | |
| Średnia temp. powietrza wewn. | | | | | | | | | | | | | | | | | | | | | | | | | ti | | | | | | | 7,8 | | | | | | | | | | | | | | | | | | | °C | | | |
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| **1.1. Wartości roczne i miesięczne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Roczne zapotrzebowanie na energię końcową dla systemów technicznych** | | | | | | | | | | | | | | | | | | | | | | | | | **kWh / rok** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rodzaje nośnika energii lub energii | | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | Urządzenia pomocniczne ogrz. i went | | | | | | Ciepła woda użytkowa | | | | | Urządzenia pomocnicze c.w.u | | | | | | | Chłodzenie | | | | | | Urządzenia pomocniczne dla chłodzenia | | | | Oświetlenie wbudowane | | | | | | | Suma | | |
| Gaz płynny | | | | | | | | | | | | 0 | | | | | 0 | | | | | | 0 | | | | | 0 | | | | | | | ------------------------------ | | | | | | ------------------------------ | | | | 0 | | | | | | | 0 | | |
| Suma [kWh/rok] | | | | | | | | | | | | 0 | | | | | 0 | | | | | | 0 | | | | | 0 | | | | | | | ------------------------------ | | | | | | ------------------------------ | | | | 0 | | | | | | | 0 | | |
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| **Roczne zapotrzebowanie na energię pierwotną dla systemów technicznych** | | | | | | | | | | | | | | | | | | | | | | | | | **kWh / rok** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rodzaje nośnika energii lub energii | | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | | | | | Ciepła woda użytkowa | | | | | | | | Chłodzenie | | | | | | | | | Oświetlenie wbudowane | | | | | | | | Suma | | | | | | | | |
| Gaz płynny | | | | | | | | | | | | 0 | | | | | | | | | 0 | | | | | | | | ------------------------------ | | | | | | | | | 0 | | | | | | | | 0 | | | | | | | | |
| Suma [kWh/rok] | | | | | | | | | | | | 0 | | | | | | | | | 0 | | | | | | | | ------------------------------ | | | | | | | | | 0 | | | | | | | | 0 | | | | | | | | |
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| **Miesięczne zestawienie danych dla stref ogrzewanych** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Liczba dni/godzin w miesiącu | | | Średnia miesięczna temperatura powietrza zewnętrznego według danych klimatycznych z najbliższej stacji meteorologicznej | | | | Zapotrzebowanie na energię użytkową do ogrzewania i wentylacji | | Całkowita ilość ciepła przenoszonego ze strefy ogrzewanej w n-tym miesiącu | | | | Ilość ciepła przenoszona ze strefy ogrzewanej przez przenikanie w n-tym miesiącu | | | | Współczynnik przenoszenia ciepła przez przenikanie ze strefy ogrzewanej w n-tym miesiącu | | | | | Ilości ciepła przenoszonego ze strefy ogrzewanej przez wentylację w n-tym miesiącu | | | Współczynnik przenoszenia ciepła przez wentylację ze strefy ogrzewanej | | | | | | Całkowita ilości zysków ciepła w strefie ogrzewanej w n-tym miesiącu | | | Współczynnik wykorzystania zysków ciepła w strefie ogrzewanej w n-tym miesiącu roku | | | | | | Bezwymiarowy stosunek zysków ciepła do bilansu cieplnego dla trybu ogrzewania | | Zyski ciepła od promieniowania słonecznego | | | | Miesięczne wewnętrzne zyski ciepła | | | | | Miesięczne zapotrzebowanie na energię użytkową do przygotowania ciepłej wody użytkowej | |
|
| Miesiąc | | Nd | | | θe,n | | | | QH,nd,s,n | | QH,ht,s,n | | | | Qtr,s,n | | | | Htr,s | | | | | Qve,s,n | | | Hve,s | | | | | | QH,gn,s,n | | | ηH,gn,s,n | | | | | | γH | | Qsol,H | | | | Qint | | | | | QW,nd,s | |
| °C | | | | kWh | | kWh | | | | kWh | | | | W/K | | | | | kWh | | | W/K | | | | | | kWh | | | - | | | | | | - | | kWh | | | | kWh | | | | | kWh | |
| Styczeń | | 31 / 744 | | | -1,5 | | | | 0 | | 870 | | | | 161 | | | | 23,4 | | | | | 709 | | | 102,7 | | | | | | 1227 | | | 0,71 | | | | | | 1,41 | | 27 | | | | 1200 | | | | | 1,7 | |
| Luty | | 28 / 672 | | | -2,4 | | | | 0 | | 862 | | | | 160 | | | | 23,4 | | | | | 702 | | | 102,7 | | | | | | 1117 | | | 0,77 | | | | | | 1,30 | | 33 | | | | 1084 | | | | | 1,7 | |
| Marzec | | 31 / 744 | | | 4,6 | | | | 0 | | 297 | | | | 55 | | | | 23,4 | | | | | 242 | | | 102,7 | | | | | | 1264 | | | 0,24 | | | | | | 4,25 | | 64 | | | | 1200 | | | | | 1,7 | |
| Kwiecień | | 30 / 720 | | | 6,3 | | | | 0 | | 134 | | | | 25 | | | | 23,4 | | | | | 109 | | | 102,7 | | | | | | 1250 | | | 0,11 | | | | | | 9,36 | | 88 | | | | 1161 | | | | | 1,7 | |
| Maj | | 31 / 744 | | | 11,6 | | | | 0 | | -359 | | | | -67 | | | | 23,4 | | | | | -293 | | | 102,7 | | | | | | 1326 | | | -0,27 | | | | | | -3,69 | | 126 | | | | 1200 | | | | | 1,7 | |
| Czerwiec | | 30 / 720 | | | 15,0 | | | | 0 | | -656 | | | | -122 | | | | 23,4 | | | | | -535 | | | 102,7 | | | | | | 1290 | | | -0,51 | | | | | | -1,97 | | 129 | | | | 1161 | | | | | 1,7 | |
| Lipiec | | 31 / 744 | | | 16,5 | | | | 0 | | -819 | | | | -152 | | | | 23,4 | | | | | -667 | | | 102,7 | | | | | | 1335 | | | -0,61 | | | | | | -1,63 | | 135 | | | | 1200 | | | | | 1,7 | |
| Sierpień | | 31 / 744 | | | 15,3 | | | | 0 | | -707 | | | | -131 | | | | 23,4 | | | | | -576 | | | 102,7 | | | | | | 1314 | | | -0,54 | | | | | | -1,86 | | 114 | | | | 1200 | | | | | 1,7 | |
| Wrzesień | | 30 / 720 | | | 12,0 | | | | 0 | | -384 | | | | -71 | | | | 23,4 | | | | | -313 | | | 102,7 | | | | | | 1240 | | | -0,31 | | | | | | -3,23 | | 79 | | | | 1161 | | | | | 1,7 | |
| Październik | | 31 / 744 | | | 7,7 | | | | 0 | | 7 | | | | 1 | | | | 23,4 | | | | | 5 | | | 102,7 | | | | | | 1250 | | | 0,01 | | | | | | 189,76 | | 50 | | | | 1200 | | | | | 1,7 | |
| Listopad | | 30 / 720 | | | 4,5 | | | | 0 | | 297 | | | | 55 | | | | 23,4 | | | | | 242 | | | 102,7 | | | | | | 1192 | | | 0,25 | | | | | | 4,02 | | 31 | | | | 1161 | | | | | 1,7 | |
| Grudzień | | 31 / 744 | | | 0,5 | | | | 0 | | 682 | | | | 126 | | | | 23,4 | | | | | 556 | | | 102,7 | | | | | | 1223 | | | 0,56 | | | | | | 1,79 | | 23 | | | | 1200 | | | | | 1,7 | |
| Suma | |  | | |  | | | | 0 | | 223 | | | | 41 | | | |  | | | | | 182 | | |  | | | | | | 15029 | | |  | | | | | |  | | 899 | | | | 14130 | | | | | 21 | |
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| InstalSystem 5 PL (Rev. 27.3) © InstalSoft 1996-2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - 19 - | | | | | | | | |
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| **1.2. Systemy techniczne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **1.2.1 Systemy ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | Średnia sezonowa sprawność wytwarzania ciepła z nośnika energii lub energii dostarczanych do źródła ciepła | | | | | | Stosunek sumy mocy cieplnej grzejników usytuowanych przy ścianach zewnętrznych do sumy mocy cieplnej wszystkich grzejników w systemie ogrzewania | | | | | Obliczeniowa średnia sezonowa sprawność regulacji i wykorzystania ciepła w przestrzeni ogrzewanej | | | | | | | Średnia sezonowa sprawność przesyłu ciepła ze źródła ciepła do przestrzeni ogrzewanej | | | | | | Średnia sezonowa sprawność akumulacji ciepła w elementach pojemnościowych systemu ogrzewania | | | | Średnia sezonowa sprawność całkowita i-tego systemu ogrzewania | | | | | | | Udział w rocznym zapotrzebowaniu na energię użytkową do ogrzewania i wentylacji zapewniany przez i-ty podsystem w systemie ogrzewania (suma udziałów jest równa 1) | | |
|
| Nazwa | | | | Nośnik energii | | | | | | | | wH | | | | | ηH,g | | | | | | x | | | | | ηH,e' | | | | | | | ηH,d | | | | | | ηH,s | | | | ηH,tot,i | | | | | | | Xi | | |
| Kocioł gazowy | | | | Gaz płynny | | | | | | | | 1,10 | | | | | 0,92 | | | | | | 1,00 | | | | | 0,88 | | | | | | | 0,96 | | | | | | 0,95 | | | | 0,74 | | | | | | | 1,00 | | |
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| **Zestawienie danych urządzeń pomocniczych dla systemów ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | Zapotrzebowanie na moc elektryczną do napędu urządzenia pomocniczego | | | | | | | Czas działania urządzenia pomocniczego w ciągu roku | | |
| Nazwa | | | | | | | | | | | | | | | | | | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | wel | | | | qel | | | | | | | tel | | |
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| **1.2.2. Systemy wentylacyjne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów wentylacyjnych** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Krotność wymiany powietrza w budynku spowodowana infiltracją powietrza przez nieszczelności obudowy budynku w warunkach eksploatacyjnych | | | | | | | | | | Podstawowy strumień powietrza zewnętrznego w okresie użytkowania budynku odniesiony do powierzchni strefy ogrzewanej | | | | Udział czasu działania wentylatorów wentylacji mechanicznej w miesiącu, równy wykorzystaniu budynku w miesiącu | | | | | | | Łączna miesięczna skuteczność zastosowania urządzenia do odzysku ciepła z powietrza wywiewanego | | |
| Typ budynku | | | | | | | | | | | | | Typ wentylacji | | | | | | | | | | | | | | | | | | n | | | | | | | | | | Vve,1,s | | | | β | | | | | | | ηoc,n | | |
| Wielorodzinny | | | | | | | | | | | | | Wentylacja mechaniczna wywiewna | | | | | | | | | | | | | | | | | | 0,2 | | | | | | | | | | 0,32 | | | | 0,30 | | | | | | | 0,00 | | |
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| **1.2.3. System przygotowania c.w.u** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów przygotowania c.w.u.** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | | Sprawność wytwarzania ciepła dla przygotowania ciepłej wody użytkowej w źródłach ciepła | | | | | Średnia roczna sprawność wykorzystania ciepła | | | | | | | Średnia roczna sprawność przesyłu ciepła ze źródła ciepła do zaworów czerpalnych | | | | | | Średnia roczna sprawność akumulacji ciepła w elementach pojemnościowych systemu przygotowania ciepłej wody użytkowej | | | | Średnia sezonowa sprawność całkowita i-tego systemu ogrzewania | | | | | | | Część całkowitej dostawy ciepła uśredniona w ciągu roku, pokrywana przez zdefiniowany system | | |
| Nazwa | | | | | | | | Nośnik energii | | | | | | | | | wW | | | | | | ηW,g | | | | | ηW,e | | | | | | | ηW,d | | | | | | ηW,s | | | | ηW,tot,i | | | | | | | Xi | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych urządzeń pomocniczych dla systemów przygotowania c.w.u.** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | Zapotrzebowanie na moc elektryczną do napędu urządzenia pomocniczego | | | | | | | Czas działania urządzenia pomocniczego w ciągu roku | | |
| Nazwa | | | | | | | | | | | | | | | | | | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | wel | | | | qel | | | | | | | tel | | |
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| **1.2.4. System wbudowanej instalacji oświetlenia.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów wbudowanej instalacji oświetlenia** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | | | | Liczbowy wskaźnik energii oświetlenia wyznaczony według PN dotyczącej charakterystyki energetycznej  budynków − wymagania energetyczne dotyczące oświetlenia | | | | | | | | | Powierzchnia pomieszczeń wyposażonych w system wbudowanej instalacji oświetlenia równa powierzchni przyjętej do obliczenia wskaźnika LENI | | | | | | Udział w rocznym zapotrzebowaniu na energię końcową dostarczaną do budynku lub części budynku dla systemu wbudowanej instalacji oświetlenia zapewniany przez l-ty podsystem w systemie wbudowanej instalacji oświetlenia (suma udziałów jest równa 1) | | | | | |
|
| Nazwa | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | | | wel | | | | | | | | LENI | | | | | | | | | AL | | | | | | Xi | | | | | |
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| **Strefa ogrzewana** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Strefa: | | | | | | | | | | | | | | | | | | | | | | | | | KOMORKA LOKATORSKA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Powierzchnia użytkowa strefy | | | | | | | | | | | | | | | | | | | | | | | | | Auż,s | | | | | | | 219,0 | | | | | | | | | | | | | | | | | | | m2 | | | |
| Powierzchnia stref o regulowanej temperaturze powietrza | | | | | | | | | | | | | | | | | | | | | | | | | Af,s | | | | | | | 219,0 | | | | | | | | | | | | | | | | | | | m2 | | | |
| Średnia temp. powietrza wewn. | | | | | | | | | | | | | | | | | | | | | | | | | ti | | | | | | | 5,0 | | | | | | | | | | | | | | | | | | | °C | | | |
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| **1.1. Wartości roczne i miesięczne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Roczne zapotrzebowanie na energię końcową dla systemów technicznych** | | | | | | | | | | | | | | | | | | | | | | | | | **kWh / rok** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rodzaje nośnika energii lub energii | | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | Urządzenia pomocniczne ogrz. i went | | | | | | Ciepła woda użytkowa | | | | | Urządzenia pomocnicze c.w.u | | | | | | | Chłodzenie | | | | | | Urządzenia pomocniczne dla chłodzenia | | | | Oświetlenie wbudowane | | | | | | | Suma | | |
| Gaz płynny | | | | | | | | | | | | 0 | | | | | 0 | | | | | | 0 | | | | | 0 | | | | | | | ------------------------------ | | | | | | ------------------------------ | | | | 0 | | | | | | | 0 | | |
| Suma [kWh/rok] | | | | | | | | | | | | 0 | | | | | 0 | | | | | | 0 | | | | | 0 | | | | | | | ------------------------------ | | | | | | ------------------------------ | | | | 0 | | | | | | | 0 | | |
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| **Roczne zapotrzebowanie na energię pierwotną dla systemów technicznych** | | | | | | | | | | | | | | | | | | | | | | | | | **kWh / rok** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rodzaje nośnika energii lub energii | | | | | | | | | | | | Ogrzewanie i wentylacja | | | | | | | | | Ciepła woda użytkowa | | | | | | | | Chłodzenie | | | | | | | | | Oświetlenie wbudowane | | | | | | | | Suma | | | | | | | | |
| Gaz płynny | | | | | | | | | | | | 0 | | | | | | | | | 0 | | | | | | | | ------------------------------ | | | | | | | | | 0 | | | | | | | | 0 | | | | | | | | |
| Suma [kWh/rok] | | | | | | | | | | | | 0 | | | | | | | | | 0 | | | | | | | | ------------------------------ | | | | | | | | | 0 | | | | | | | | 0 | | | | | | | | |
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| **Miesięczne zestawienie danych dla stref ogrzewanych** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Liczba dni/godzin w miesiącu | | | Średnia miesięczna temperatura powietrza zewnętrznego według danych klimatycznych z najbliższej stacji meteorologicznej | | | | Zapotrzebowanie na energię użytkową do ogrzewania i wentylacji | | Całkowita ilość ciepła przenoszonego ze strefy ogrzewanej w n-tym miesiącu | | | | Ilość ciepła przenoszona ze strefy ogrzewanej przez przenikanie w n-tym miesiącu | | | | Współczynnik przenoszenia ciepła przez przenikanie ze strefy ogrzewanej w n-tym miesiącu | | | | | Ilości ciepła przenoszonego ze strefy ogrzewanej przez wentylację w n-tym miesiącu | | | Współczynnik przenoszenia ciepła przez wentylację ze strefy ogrzewanej | | | | | | Całkowita ilości zysków ciepła w strefie ogrzewanej w n-tym miesiącu | | | Współczynnik wykorzystania zysków ciepła w strefie ogrzewanej w n-tym miesiącu roku | | | | | | Bezwymiarowy stosunek zysków ciepła do bilansu cieplnego dla trybu ogrzewania | | Zyski ciepła od promieniowania słonecznego | | | | Miesięczne wewnętrzne zyski ciepła | | | | | Miesięczne zapotrzebowanie na energię użytkową do przygotowania ciepłej wody użytkowej | |
|
| Miesiąc | | Nd | | | θe,n | | | | QH,nd,s,n | | QH,ht,s,n | | | | Qtr,s,n | | | | Htr,s | | | | | Qve,s,n | | | Hve,s | | | | | | QH,gn,s,n | | | ηH,gn,s,n | | | | | | γH | | Qsol,H | | | | Qint | | | | | QW,nd,s | |
| °C | | | | kWh | | kWh | | | | kWh | | | | W/K | | | | | kWh | | | W/K | | | | | | kWh | | | - | | | | | | - | | kWh | | | | kWh | | | | | kWh | |
| Styczeń | | 31 / 744 | | | -1,5 | | | | 0 | | 726 | | | | 247 | | | | 51,1 | | | | | 479 | | | 99,0 | | | | | | 1246 | | | 0,58 | | | | | | 1,72 | | 89 | | | | 1157 | | | | | 1,7 | |
| Luty | | 28 / 672 | | | -2,4 | | | | 0 | | 747 | | | | 254 | | | | 51,1 | | | | | 492 | | | 99,0 | | | | | | 1155 | | | 0,65 | | | | | | 1,55 | | 110 | | | | 1045 | | | | | 1,7 | |
| Marzec | | 31 / 744 | | | 4,6 | | | | 0 | | 45 | | | | 15 | | | | 51,1 | | | | | 29 | | | 99,0 | | | | | | 1373 | | | 0,03 | | | | | | 30,72 | | 216 | | | | 1157 | | | | | 1,7 | |
| Kwiecień | | 30 / 720 | | | 6,3 | | | | 0 | | -141 | | | | -48 | | | | 51,1 | | | | | -93 | | | 99,0 | | | | | | 1416 | | | -0,10 | | | | | | -10,07 | | 297 | | | | 1119 | | | | | 1,7 | |
| Maj | | 31 / 744 | | | 11,6 | | | | 0 | | -737 | | | | -251 | | | | 51,1 | | | | | -486 | | | 99,0 | | | | | | 1581 | | | -0,47 | | | | | | -2,14 | | 424 | | | | 1157 | | | | | 1,7 | |
| Czerwiec | | 30 / 720 | | | 15,0 | | | | 0 | | -1081 | | | | -368 | | | | 51,1 | | | | | -713 | | | 99,0 | | | | | | 1552 | | | -0,70 | | | | | | -1,44 | | 432 | | | | 1119 | | | | | 1,7 | |
| Lipiec | | 31 / 744 | | | 16,5 | | | | 0 | | -1285 | | | | -437 | | | | 51,1 | | | | | -847 | | | 99,0 | | | | | | 1609 | | | -0,80 | | | | | | -1,25 | | 452 | | | | 1157 | | | | | 1,7 | |
| Sierpień | | 31 / 744 | | | 15,3 | | | | 0 | | -1151 | | | | -392 | | | | 51,1 | | | | | -759 | | | 99,0 | | | | | | 1541 | | | -0,75 | | | | | | -1,34 | | 384 | | | | 1157 | | | | | 1,7 | |
| Wrzesień | | 30 / 720 | | | 12,0 | | | | 0 | | -757 | | | | -258 | | | | 51,1 | | | | | -499 | | | 99,0 | | | | | | 1384 | | | -0,55 | | | | | | -1,83 | | 264 | | | | 1119 | | | | | 1,7 | |
| Październik | | 31 / 744 | | | 7,7 | | | | 0 | | -302 | | | | -103 | | | | 51,1 | | | | | -199 | | | 99,0 | | | | | | 1326 | | | -0,23 | | | | | | -4,40 | | 169 | | | | 1157 | | | | | 1,7 | |
| Listopad | | 30 / 720 | | | 4,5 | | | | 0 | | 54 | | | | 18 | | | | 51,1 | | | | | 36 | | | 99,0 | | | | | | 1224 | | | 0,04 | | | | | | 22,63 | | 104 | | | | 1119 | | | | | 1,7 | |
| Grudzień | | 31 / 744 | | | 0,5 | | | | 0 | | 503 | | | | 171 | | | | 51,1 | | | | | 332 | | | 99,0 | | | | | | 1233 | | | 0,41 | | | | | | 2,45 | | 76 | | | | 1157 | | | | | 1,7 | |
| Suma | |  | | |  | | | | 0 | | -3379 | | | | -1150 | | | |  | | | | | -2228 | | |  | | | | | | 16639 | | |  | | | | | |  | | 3020 | | | | 13619 | | | | | 20 | |
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| **1.2. Systemy techniczne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **1.2.1 Systemy ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | Średnia sezonowa sprawność wytwarzania ciepła z nośnika energii lub energii dostarczanych do źródła ciepła | | | | | | Stosunek sumy mocy cieplnej grzejników usytuowanych przy ścianach zewnętrznych do sumy mocy cieplnej wszystkich grzejników w systemie ogrzewania | | | | | Obliczeniowa średnia sezonowa sprawność regulacji i wykorzystania ciepła w przestrzeni ogrzewanej | | | | | | | Średnia sezonowa sprawność przesyłu ciepła ze źródła ciepła do przestrzeni ogrzewanej | | | | | | Średnia sezonowa sprawność akumulacji ciepła w elementach pojemnościowych systemu ogrzewania | | | | Średnia sezonowa sprawność całkowita i-tego systemu ogrzewania | | | | | | | Udział w rocznym zapotrzebowaniu na energię użytkową do ogrzewania i wentylacji zapewniany przez i-ty podsystem w systemie ogrzewania (suma udziałów jest równa 1) | | |
|
| Nazwa | | | | Nośnik energii | | | | | | | | wH | | | | | ηH,g | | | | | | x | | | | | ηH,e' | | | | | | | ηH,d | | | | | | ηH,s | | | | ηH,tot,i | | | | | | | Xi | | |
| Kocioł gazowy | | | | Gaz płynny | | | | | | | | 1,10 | | | | | 0,92 | | | | | | 1,00 | | | | | 0,88 | | | | | | | 0,96 | | | | | | 0,95 | | | | 0,74 | | | | | | | 1,00 | | |
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| **Zestawienie danych urządzeń pomocniczych dla systemów ogrzewania** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | Zapotrzebowanie na moc elektryczną do napędu urządzenia pomocniczego | | | | | | | Czas działania urządzenia pomocniczego w ciągu roku | | |
| Nazwa | | | | | | | | | | | | | | | | | | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | wel | | | | qel | | | | | | | tel | | |
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| **1.2.2. Systemy wentylacyjne** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów wentylacyjnych** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Krotność wymiany powietrza w budynku spowodowana infiltracją powietrza przez nieszczelności obudowy budynku w warunkach eksploatacyjnych | | | | | | | | | | Podstawowy strumień powietrza zewnętrznego w okresie użytkowania budynku odniesiony do powierzchni strefy ogrzewanej | | | | Udział czasu działania wentylatorów wentylacji mechanicznej w miesiącu, równy wykorzystaniu budynku w miesiącu | | | | | | | Łączna miesięczna skuteczność zastosowania urządzenia do odzysku ciepła z powietrza wywiewanego | | |
| Typ budynku | | | | | | | | | | | | | Typ wentylacji | | | | | | | | | | | | | | | | | | n | | | | | | | | | | Vve,1,s | | | | β | | | | | | | ηoc,n | | |
| Wielorodzinny | | | | | | | | | | | | | Wentylacja mechaniczna wywiewna | | | | | | | | | | | | | | | | | | 0,2 | | | | | | | | | | 0,32 | | | | 0,30 | | | | | | | 0,00 | | |
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| **1.2.3. System przygotowania c.w.u** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów przygotowania c.w.u.** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | | Sprawność wytwarzania ciepła dla przygotowania ciepłej wody użytkowej w źródłach ciepła | | | | | Średnia roczna sprawność wykorzystania ciepła | | | | | | | Średnia roczna sprawność przesyłu ciepła ze źródła ciepła do zaworów czerpalnych | | | | | | Średnia roczna sprawność akumulacji ciepła w elementach pojemnościowych systemu przygotowania ciepłej wody użytkowej | | | | Średnia sezonowa sprawność całkowita i-tego systemu ogrzewania | | | | | | | Część całkowitej dostawy ciepła uśredniona w ciągu roku, pokrywana przez zdefiniowany system | | |
| Nazwa | | | | | | | | Nośnik energii | | | | | | | | | wW | | | | | | ηW,g | | | | | ηW,e | | | | | | | ηW,d | | | | | | ηW,s | | | | ηW,tot,i | | | | | | | Xi | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych urządzeń pomocniczych dla systemów przygotowania c.w.u.** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | Zapotrzebowanie na moc elektryczną do napędu urządzenia pomocniczego | | | | | | | Czas działania urządzenia pomocniczego w ciągu roku | | |
| Nazwa | | | | | | | | | | | | | | | | | | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | wel | | | | qel | | | | | | | tel | | |
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| **1.2.4. System wbudowanej instalacji oświetlenia.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Zestawienie danych dla systemów wbudowanej instalacji oświetlenia** | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | Współczynnik nakładu nieodnawialnej energii pierwotnej na wytworzenie i dostarczenie energii | | | | | | | | Liczbowy wskaźnik energii oświetlenia wyznaczony według PN dotyczącej charakterystyki energetycznej  budynków − wymagania energetyczne dotyczące oświetlenia | | | | | | | | | Powierzchnia pomieszczeń wyposażonych w system wbudowanej instalacji oświetlenia równa powierzchni przyjętej do obliczenia wskaźnika LENI | | | | | | Udział w rocznym zapotrzebowaniu na energię końcową dostarczaną do budynku lub części budynku dla systemu wbudowanej instalacji oświetlenia zapewniany przez l-ty podsystem w systemie wbudowanej instalacji oświetlenia (suma udziałów jest równa 1) | | | | | |
|
| Nazwa | | | | | | | | | | Nośnik energii | | | | | | | | | | | | | | | | wel | | | | | | | | LENI | | | | | | | | | AL | | | | | | Xi | | | | | |
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